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COMMONWEALTH OF VIRGINIA

Trends in
Hospitalization for Mental Disease
and Mental Deficiency in
Virginia

Prepared for
STATE HOSPITAL BOARD

By
POPULATION STUDY
VIRGINIA STATE PLANNING BOARD
RICHMOND, VIRGINIA
1942

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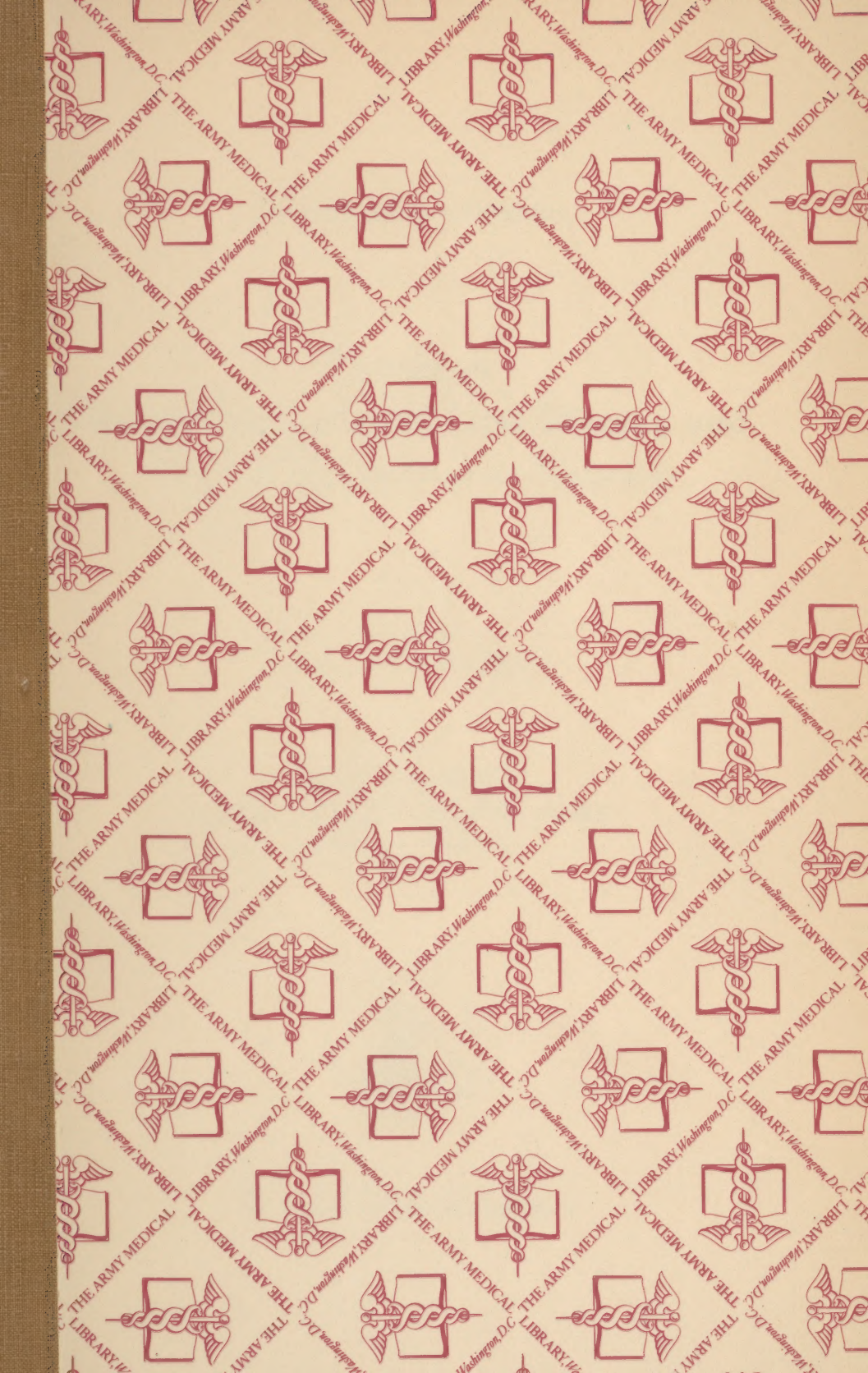
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COMMONWEALTH OF VIRGINIA
VIRGINIA STATE PLANNING BOARD
301 STATE FINANCE BUILDING
RICHMOND

February 19, 1942.

DR. H. C. HENRY,
*Director of State Hospitals,
309 North 12th Street,
Richmond, Virginia.*

DEAR DR. HENRY:

Pursuant to your request that the Virginia State Planning Board, through the Population Study, inquire into the population factors related to the incidence of mental disease and mental deficiency in Virginia, and in furtherance of the Board's collaborative study with you of factors affecting future building requirements of the State's mental hospitals, we submit herewith a report by the Population Study of the Board entitled "Trends in Hospitalization for Mental Disease and Mental Deficiency in Virginia."

Respectfully,

VIRGINIA STATE PLANNING BOARD

HRP:B

HUGH R. POMEROY, *Director.*



COMMONWEALTH OF VIRGINIA
VIRGINIA STATE PLANNING BOARD
301 STATE FINANCE BUILDING
RICHMOND

February 19, 1942.

MR. HUGH R. POMEROY, DIRECTOR,
*Virginia State Planning Board,
301 State Finance Building,
Richmond, Virginia.*

DEAR MR. POMEROY:

I have the honor to submit herewith a report of Trends in Hospitalization for Mental Disease and Mental Deficiency in Virginia.

One of the important phases of the program of the Population Study concerns itself with the analysis of characteristics of the population. In our search for materials which would provide a basis for appraising the incidence of mental disease and mental deficiency, we found the State Hospital Board a most helpful source. As we discussed this phase of the Population Study with Dr. H. C. Henry, Director, and Mr. F. W. Gwaltney, Executive Secretary, of the Board, they expressed the hope that we would pursue an inquiry into population factors related to these conditions.

The present report represents a preliminary excursion into the factors influencing the recent trends in mental disease and mental deficiency in Virginia. The methods of analysis are somewhat exploratory and experimental. The results obtained from this method of inquiry hold considerable promise as a means of appraising the social and economic factors which influence mental disease and mental deficiency.

Respectfully yours,

LORIN A. THOMPSON,
Director, Population Study

LAT:B

Trends in Hospitalization for Mental Disease and Mental Deficiency in Virginia

INTRODUCTION

This report brings together the available information regarding the patients in Virginia's institutions for the mentally diseased and mentally defective. Since the available data are fragmentary and incomplete in certain respects, it cannot be expected that a comprehensive report can be made at this time. However, there are certain trends regarding the care and hospitalization of mental patients in Virginia that may be useful in planning for the immediate future. The changing patient load and commitment rates for the last decade are examined in this report in some detail. Where the data will permit, an analysis has also been made of the following separate components of the population: white males, white females, Negro males, and Negro females. The incidence of mental disturbance by the age of first admissions is also shown for the last decade.

This summary shows the extent to which the number of mentally disturbed committed to institutions in the State is increasing or decreasing. Further inquiry is directed toward the trends among different sectors of the population with respect to commitment of the several kinds of mental disturbance. This seems to hold some promise as a method of gauging what provision needs to be made for the institutional population in the immediate future.

An analysis of institutional figures has limitations in that comparable methods of reporting such statistics for the various State hospitals and colonies is only a recent development. For this reason it has been possible to analyze in detail only the recent figures. Mental patients have been separated into four categories: (1) mentally diseased, (2) mentally deficient, (3) epileptic, and (4) alcoholic. The treatment of alcoholics in Virginia differs widely from the practices of most other states. The categories are those now used in the statistical reporting adopted by the Division of Vital Statistics of the United States Bureau of the Census in cooperation with the American Psychiatric Association.

I TRENDS IN HOSPITALIZATION OF MENTAL PATIENTS IN VIRGINIA

A general picture of the institutional population of Virginia is shown in Figure 1 (see Appendix Table 1) which details the number of patients in institutions for mental diseases and mental defectives in Virginia from 1914 to 1940 separately by race. Figure 2 (Table 1) shows the relation between incidence of patients and the total popula-

FIGURE 1

PATIENT POPULATION IN INSTITUTIONS FOR MENTAL DISEASES AND MENTAL DEFECTIVES BY COLOR, VIRGINIA, JULY 1, 1913 TO JUNE 30, 1940.

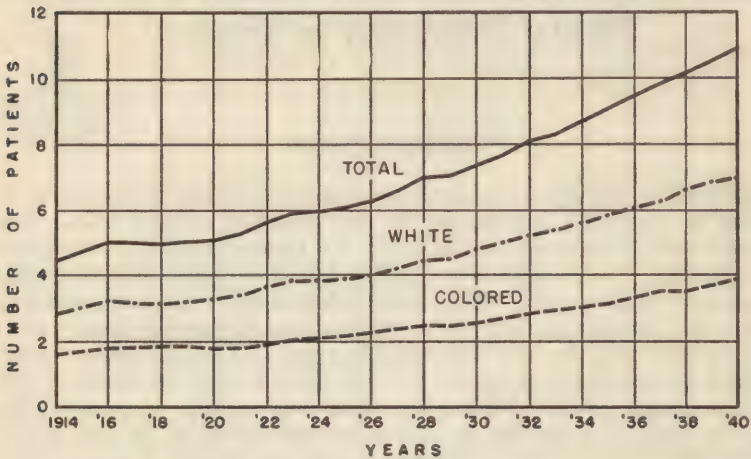
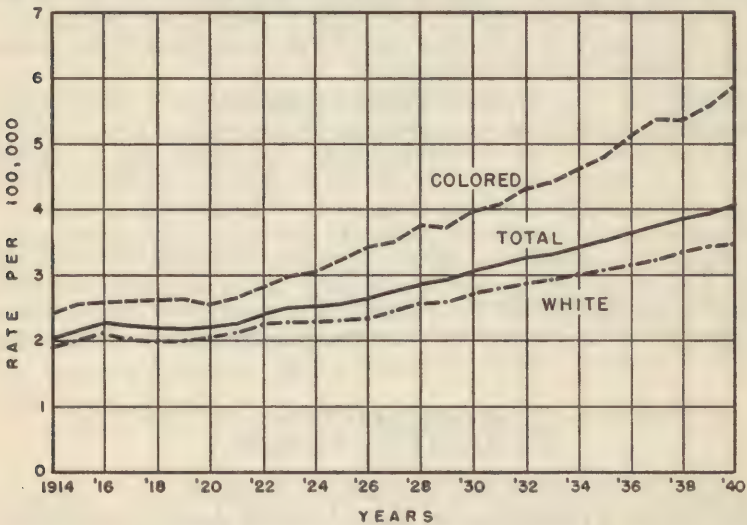


FIGURE 2

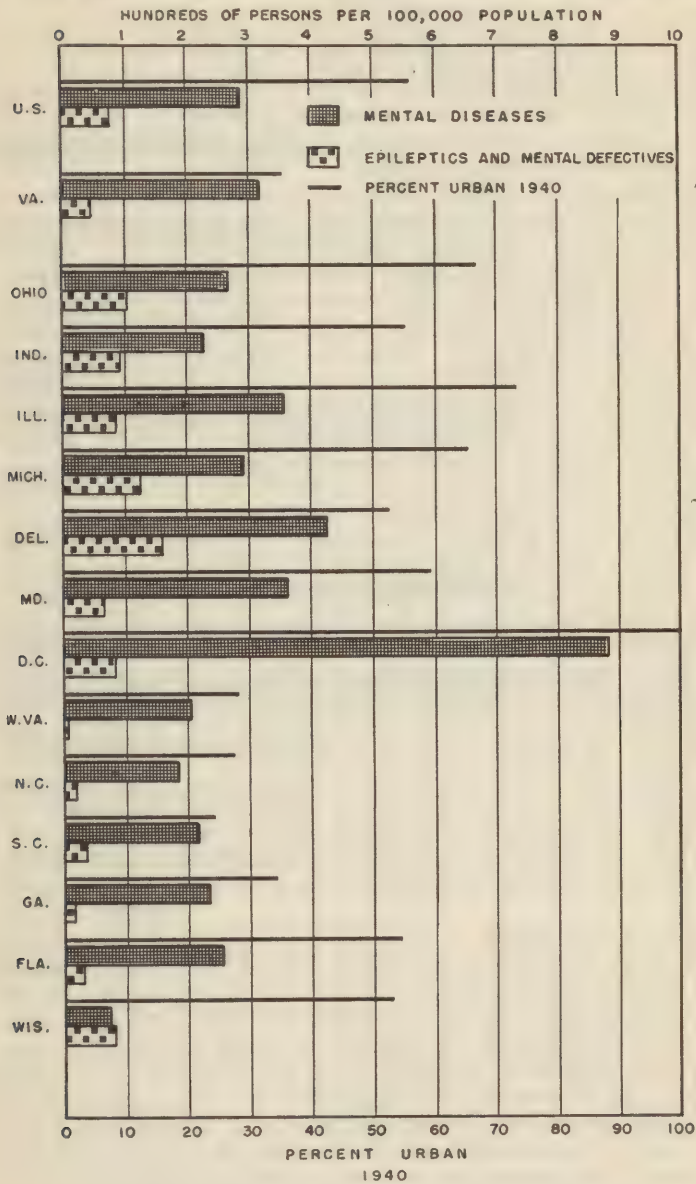
RATE PER 100,000 POPULATION OF PATIENTS IN INSTITUTIONS FOR MENTAL DISEASES AND MENTAL DEFECTIVES, BY COLOR, VIRGINIA, JULY 1, 1913 TO JUNE 30, 1940.



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FIGURE 3

RATE PER 100,000 POPULATION OF PATIENTS IN MENTAL INSTITUTIONS
FOR SELECTED STATES 1938, AND PERCENT URBAN POPULATION 1940.



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tion, or the rate per hundred thousand, separately by white and colored. In this comparison it is unfortunate that the statistics are such that it is not possible to compare the rates of mental disease, mental deficiency, and epilepsy separately.

The rates per hundred thousand of population for the period 1930 to 1940 have been recomputed and differ somewhat from those reported by the State Hospital Board in its 1939 report. These figures differ by reason of the fact that the interim population for the last decade has been more accurately estimated since the 1940 population figures for the State have become available.

In Figures 1 and 2 there are several factors which stand out. Both the absolute and relative numbers of patients cared for by institutions for mental diseases and mental defectives have increased. The rate for the total population rose from 207 per hundred thousand in 1914 to 305 in 1930 and to 407 in 1940. Among the whites the corresponding rates were 190, 271, and 347. For the colored population the corresponding rates were 242, 397, and 591. Thus, the rates of the colored population have increased considerably faster than those of the white population. On first thought the relatively rapid increase in the hospitalization of the patients in the institutions of the State would appear to reflect a tremendous increase in mental disease and mental deficiency. On the contrary, the increase probably reflects only an intelligent recognition of the problem in the Commonwealth and an effort to meet it.

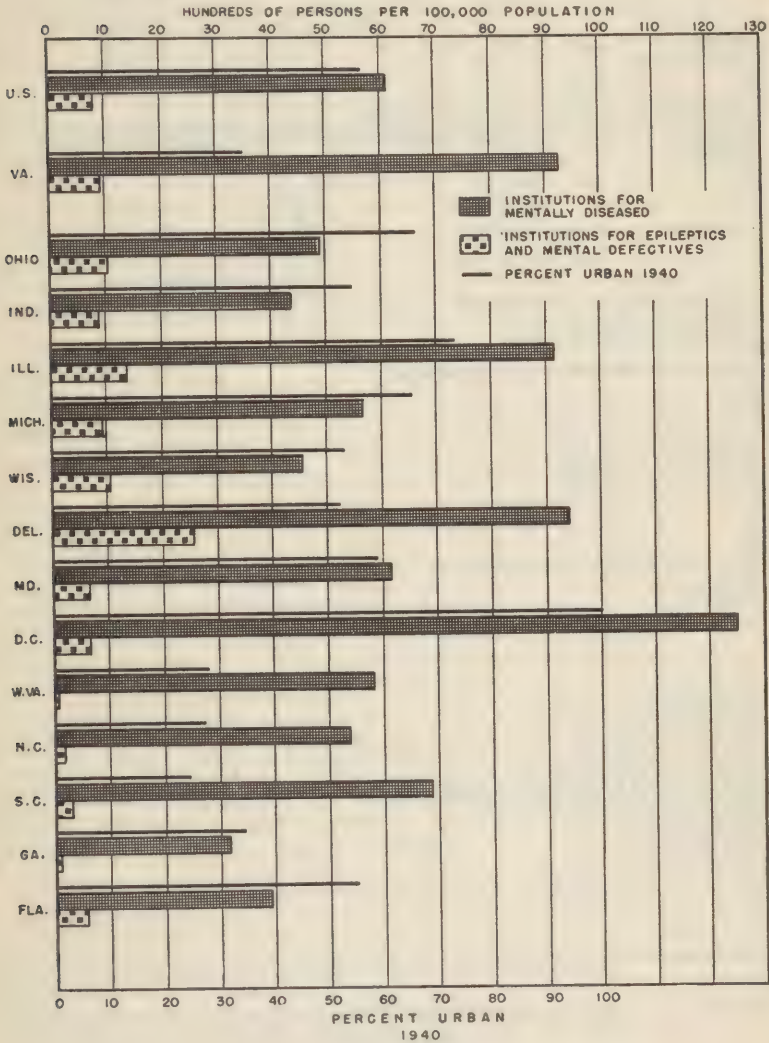
Figure 3 (see Table 2, Appendix) compares Virginia with the United States average, with a group of middle western states, and with a number of states in the South Atlantic area, with respect to the rate of patient population in institutions for the mentally diseased, mentally defective, and epileptic. The percent of urban population in 1940 is also shown for each state, which permits a comparison of patient rates and extent of urbanization. These statistics appear to reflect the different administrative practices of the various states and can scarcely serve as reliable guides to the incidence of mental disease and mental deficiency. They indicate, however, that those states which have larger urban populations have proportionately larger patient rates. This phenomenon is probably due to the fact that the need for the care of mentally diseased and mentally deficient persons increases as the proportion of people living in a complex urban environment increases.

Figure 4 (see Table 3, Appendix) compares the first admission rates to State institutions in Virginia with the United States, several middle western and the South Atlantic states with respect to mental disease, and epilepsy and mental deficiency. The first admission rate of the mentally diseased for Virginia is about the same as that for Illinois, and considerably higher than the rates for Ohio, Indiana, Michigan, and Wisconsin, as well as for other South Atlantic states, except Delaware and the District of Columbia. The rate for Virginia is higher than the average for the United States, but would not be so much larger if the proportion of non-psychotic alcoholics did not comprise about one-fourth of the total number of first admissions.

With respect to the epileptics and the mentally deficient, the rate is 9.0 per hundred thousand for Virginia as compared with 8.0 for

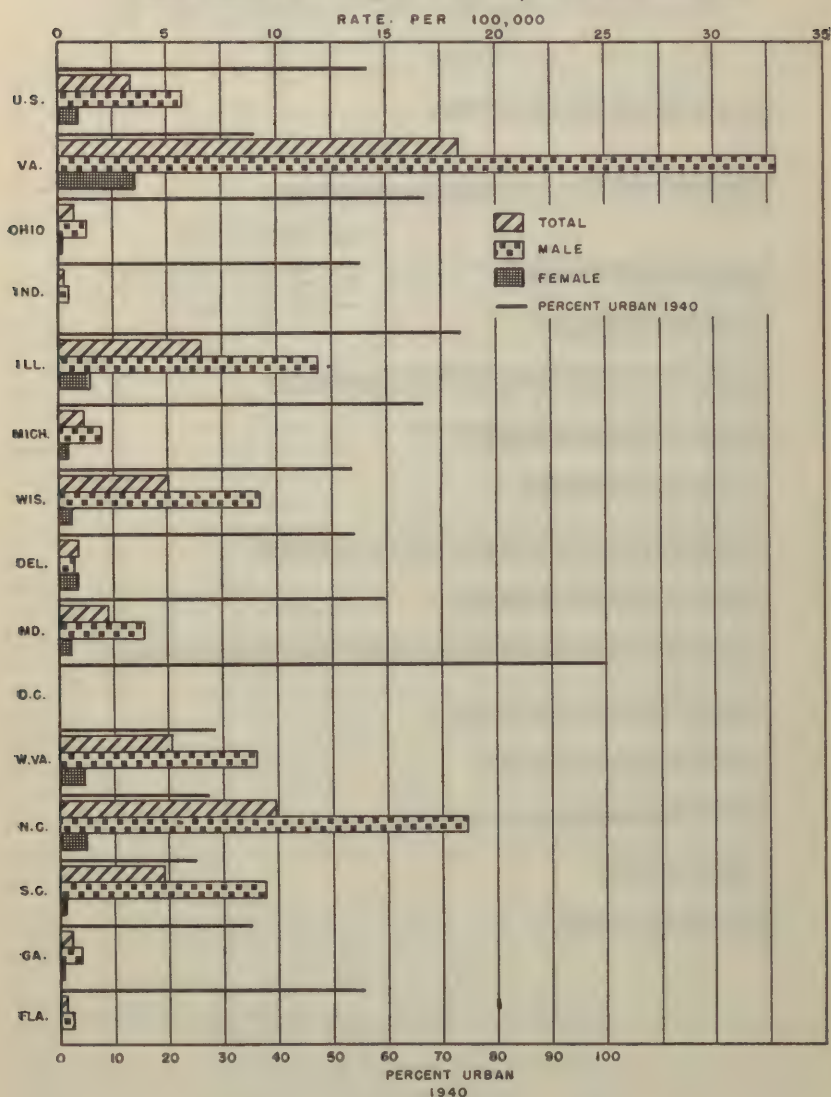
FIGURE 4

RATES PER 100,000 POPULATION OF FIRST ADMISSIONS TO MENTAL INSTITUTIONS FOR SELECTED STATES 1938, AND PERCENT URBAN 1940.



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FIGURE 5
FIRST ADMISSIONS OF ALCOHOLIC PATIENTS (WITHOUT PSYCHOSIS) TO
MENTAL HOSPITALS, FOR SELECTED STATES 1938, AND PERCENT URBAN 1940.



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the total United States. It may be observed that the rate for Virginia is lower than the rates for Ohio, Illinois, and Wisconsin, and slightly higher than those for Indiana and Michigan. It is higher than for any of the South Atlantic states except Delaware. There are few states in the country, however, which make adequate provision for the care of the feebleminded.

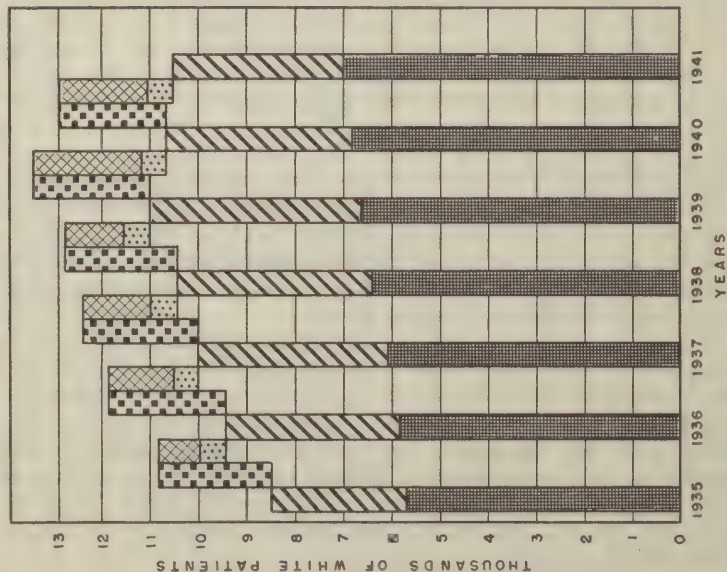
Figure 5 (see Table 4, Appendix) compares the first admission rates of alcoholics without psychosis by sex for the same group of states. It will be noted that Virginia has a commitment rate for alcoholics without psychoses of 18.2 per hundred thousand. This is the highest such admission rate among all the states of the Union. In the group of states under consideration, the rate for North Carolina of 9.8 per hundred thousand is the second highest. The figures as presented, however, cannot be considered as representing true differences in the incidence of alcoholism, but rather reflect the administrative practices among the states with respect to the problem. These rates reflect the different legal definitions of inebriacy and the methods of dealing with "drunks." Most states send "drunks" to jail, while in Virginia they are often committed to the State Hospitals.

Figures 6 and 7 (see Table 5, Appendix) show the movement of the State's population in State institutions for mentally diseased and mentally deficient from 1935 to 1940. These figures are taken from a summary of the reports issued by the State Hospital Board. The figures illustrate graphically the movement of patient population, by color, for all institutions during this period; the number of patients in hospitals at the beginning of the year, the number on parole or on escape, the number admitted during the year, and the number who died or were discharged. The total indicates the number of patients on the books. Adjacent to the top of this bar is another bar indicating the total number of admissions during the year, including first admissions and readmissions. Adjacent to the admissions bar is a third bar indicating the number of patients who died or were discharged during the year. The solid portion of the bar for each year indicates the total number of patients in the institutions. This number has been increasing steadily. There is also a considerable number of patients on parole or on escape. There has been little change in the number of admissions during the last five years, but the number of patients discharged has increased. This may possibly reflect a changing administrative policy on the part of the State Hospital Board.

There are no striking differences between the behavior of the white and colored groups, other than the fact that the proportion of white patients on parole or on escape is much larger than the colored. The figures which include the number on parole and on escape were grouped together until 1939, for which year they are shown separately. Marked improvement in the number of escapes of white patients was shown in 1940 with less than half the number reported in 1939. This may be the result of either a change in administrative procedure or a change in the methods of reporting.

FIGURE 6

MOVEMENT OF WHITE PATIENT POPULATION IN STATE INSTITUTIONS
FOR MENTAL DISEASES AND MENTAL DEFECTIVES, VIRGINIA, 1935-1941.

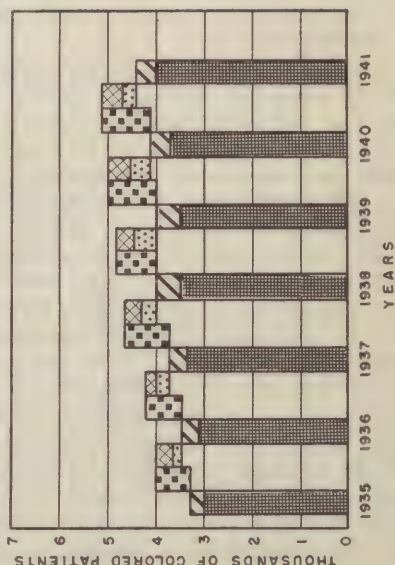


LEGEND

- NUMBER OF PATIENTS IN HOSPITAL AT BEGINNING OF YEAR
- ▨ NUMBER OF PATIENTS ON PAROLE OR ESCAPE AT BEGINNING OF YEAR
- ▣ NUMBER OF PATIENTS ADMITTED DURING YEAR
- ▤ NUMBER OF PATIENTS DISCHARGED DURING YEAR
- ▥ NUMBER OF PATIENTS WHO DIED DURING YEAR

FIGURE 7

MOVEMENT OF COLORED PATIENT POPULATION IN STATE INSTITUTIONS
FOR MENTAL DISEASES AND MENTAL DEFECTIVES, VIRGINIA, 1935-1941.



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II ANALYSIS OF TOTAL FIRST ADMISSIONS

In the preceding section attention was given to the total load carried by the State institutions for mental diseases and mental defectives. It is desirable, however, to study the composition of the patient population and the characteristics of the first admissions, so that a more satisfactory picture of future possibilities may be gained. The most promising method of analysis is to study the first admissions to the State mental institutions by type of disorder and by age.

For the years 1931 and 1935 through 1940 it has been possible to separate the first admissions to the six State mental institutions into four major types: the insane, alcoholics without psychosis, epileptics, and the feeble-minded. The reports from 1932 to 1934 are incomplete in some respects, and consequently, they were omitted. Administrative practice in patient placement is to a large extent based on this classification. The insane, who constitute by far the largest group, including all admissions not otherwise classified, are treated at four mental hospitals: Eastern State, Western State, and Southwestern State for white patients; and Central State for colored patients. The largest proportion of the white alcoholics without psychosis are admitted to Western State Hospital. Separate departments at the Lynchburg Colony are maintained for white feeble-minded patients and for white epileptics. Colored feeble-minded males are treated at the Petersburg Colony. In addition, a number of colored feeble-minded persons including all the women, are placed in Central State Hospital. The colored epileptics are also treated at Central State.

Figures 8 and 9 (see Table 6, Appendix) show first admissions for these four types of patients by color and by sex. The difference in incidence of the principal types of disorders as between males and females has not varied greatly from year to year. Among the insane there were more men than women in both the white and colored groups for the years compared. White males made up a large part of the group of alcoholics without psychosis. The sex differences were not so pronounced in the epileptic and feeble-minded groups. There were slightly more admissions of epileptic men than of women. On the other hand, there were more first admissions of women than men among the white group of feeble-minded in all but two years. Among the colored feeble-minded persons, there was little difference between the numbers of men and women admitted.

In studying the ages of first admissions to mental institutions a somewhat more detailed classification of types of disorder has been made. This is done in order to show the striking age differences for the various diseases. The figures which follow show the age distributions of all first admissions to all mental institutions, and the age distributions for a number of separate disease classifications for the years 1931, 1939, and 1940.

Figures 10 and 11 (see Table 7, Appendix) show the ages of first admissions to State mental institutions of all types for the years 1931, 1939 and 1940. Figure 10 shows the number of first admissions by age groups. Figure 11 shows the corresponding age specific admission rates by five-year age groups. It will be noted in Figure 10 that the

FIGURE 8

WHITE-FIRST ADMISSIONS TO STATE
INSTITUTIONS BY SEX AND TYPE OF
DISORDER, VIRGINIA, 1931, 1935 - '40

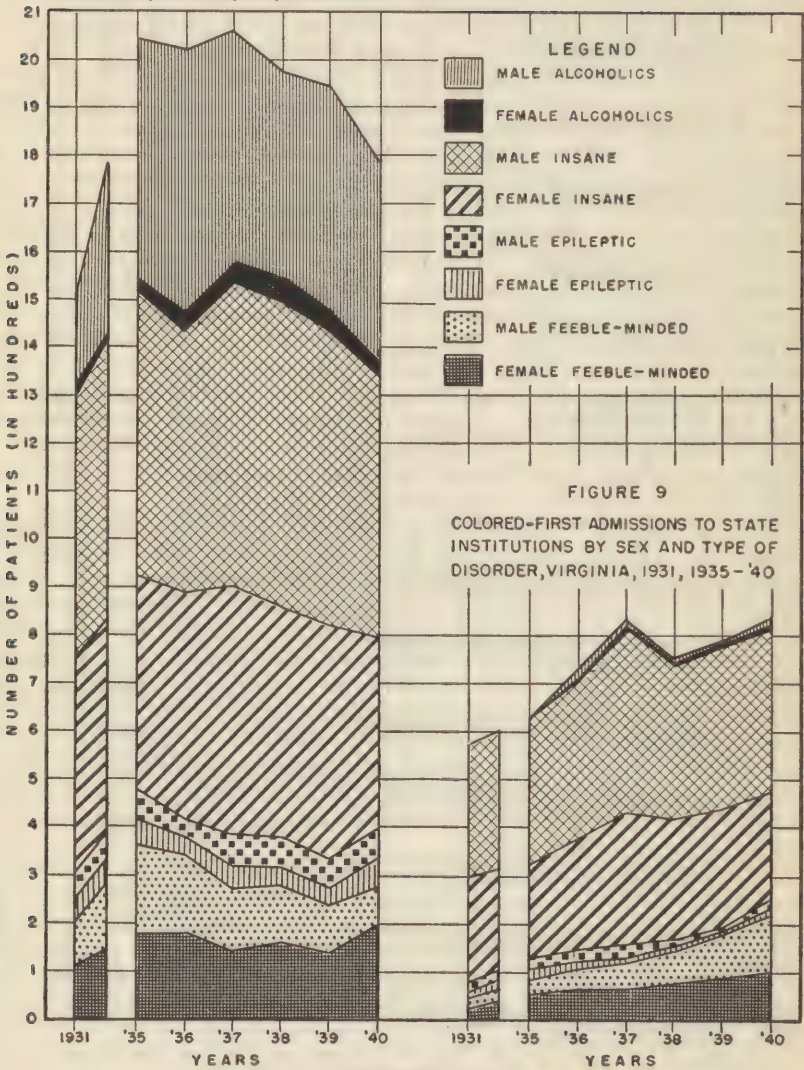
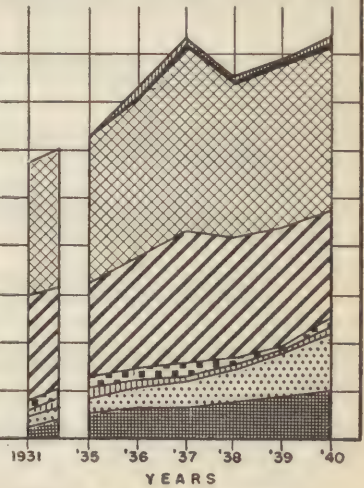


FIGURE 9

COLORED-FIRST ADMISSIONS TO STATE
INSTITUTIONS BY SEX AND TYPE OF
DISORDER, VIRGINIA, 1931, 1935 - '40



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FIGURE 10
FIRST ADMISSIONS OF ALL PATIENTS TO STATE MENTAL
INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

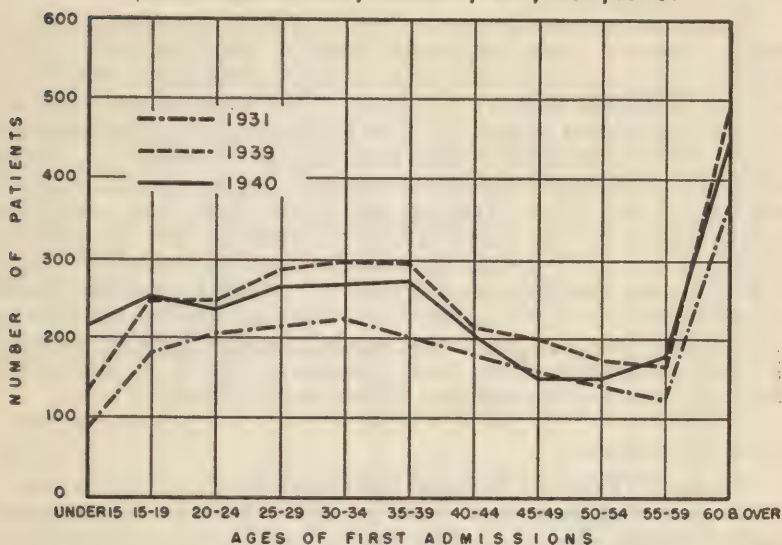
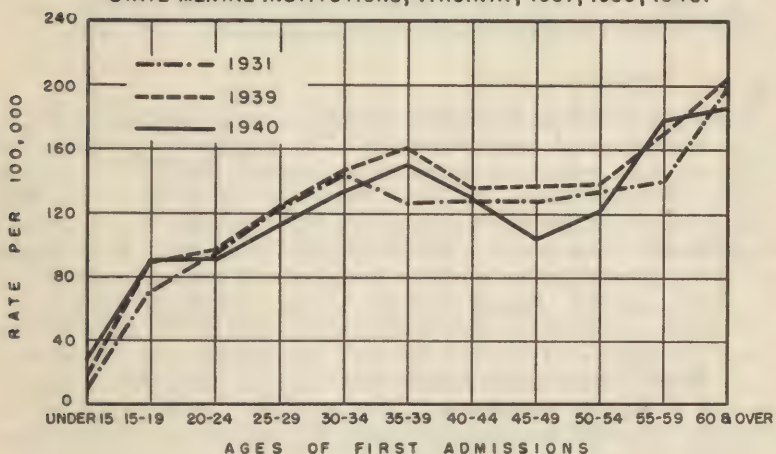


FIGURE 11
AGE SPECIFIC FIRST ADMISSION RATES OF ALL PATIENTS TO
STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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number of first admissions under 55 years of age was larger in 1939 and in 1940 than it was in 1931. In 1931 the number of commitments of those over 60 was less than in either 1939 or 1940. The component parts of this picture will be clearer as each of the major classifications is considered separately.

The following classifications of mental disease are shown each on a separate figure: senile psychosis; cerebral arteriosclerosis; manic-depressive psychosis; dementia praecox (schizophrenia); all other types, including alcoholics without psychosis. The feeble-minded and epileptics are also shown separately. The first figure in each pair shows the number of first admissions in each classification by age groups, and the second figure in each pair shows the corresponding age specific admission rates. In all the figures five-year age classes have been used where possible. When the age data available for inclusion were given in ten-year age classes, the five-year age class has been estimated by dividing the ten-year age class into equal groups. It would be possible to refine further the age data given in ten-year classes by distributing the cases into five-year classes in proportion to their number in their respective color and sex groups of the total population. In view of the small numbers involved this procedure did not seem advisable.

SENILE PSYCHOSES

Figure 12 (Table 8, Appendix) of this series shows the number of first admission patients with senile psychoses for three selected years. Figure 13 shows the age specific first admission rates of this group. There has been no appreciable change either in the number of patients committed or the age specific rate. The figures indicate, however, that fewer patients under age 60 were committed in 1939 and 1940 than in 1931. This probably reflects the influence of other social programs designed to give assistance to the aged.

CEREBRAL ARTERIOSCLEROSIS

Figure 14 (Table 9, Appendix) shows the same information for the patients with cerebral arteriosclerosis. The number of patients with this malady who were committed to institutions increased sharply in 1939 and 1940 as compared to 1931. With the population of the State becoming older, a larger number of people will be susceptible to cerebral arteriosclerosis, since this is a disease typical of old age. In all probability the number of patients in this category will increase considerably in the years to come. Figure 15 shows the age specific admission rates for the disease. There has also been a sharp rise in the admissions of patients per hundred thousand for each age group over 55, between 1931 and 1940. This increase may be due to better methods of diagnosis, as well as to greater awareness of the problem. It is of further importance to note that few patients under 50 years of age are committed to institutions with arteriosclerosis.

MANIC-DEPRESSIVE PSYCHOSES

Figures 16 and 17 (Table 10, Appendix) show that there has been a tendency for both the numbers and rates per hundred thousand to

FIGURE 12

FIRST ADMISSIONS OF PATIENTS WITH SENILE PSYCHOSIS TO STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

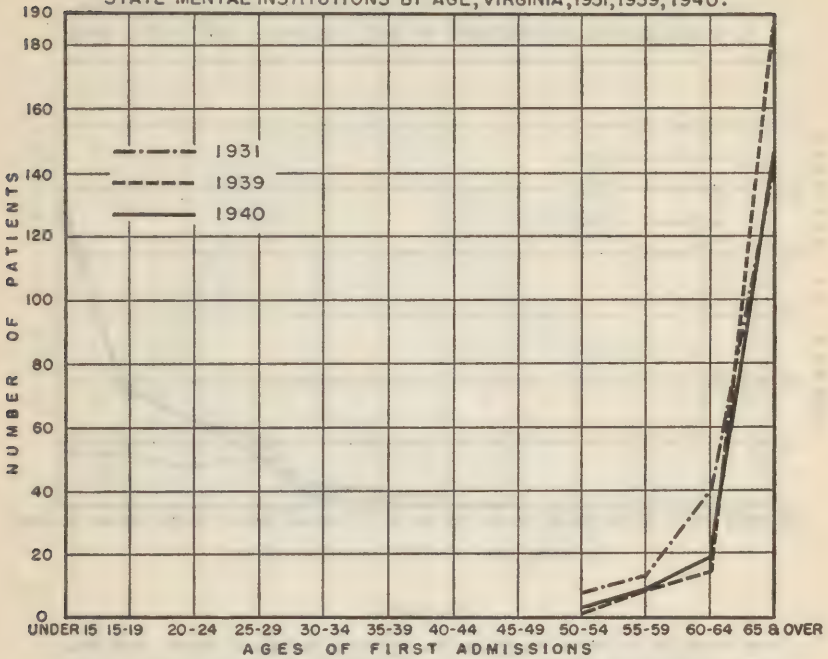
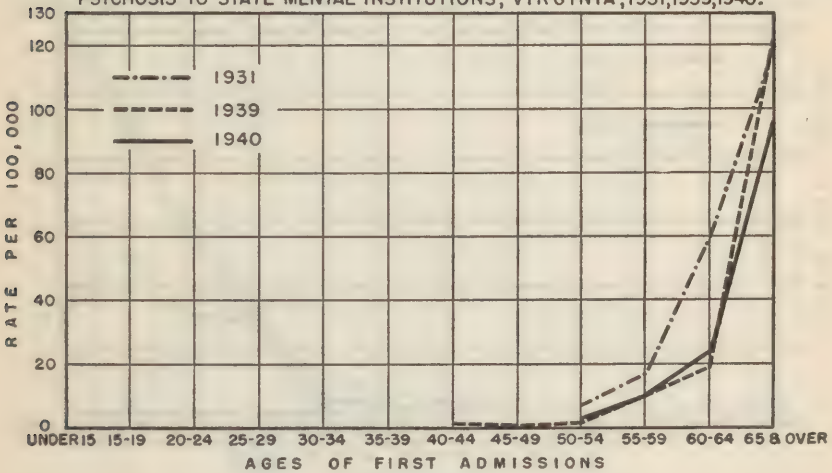


FIGURE 13

AGE SPECIFIC FIRST ADMISSION RATES OF PATIENTS WITH SENILE PSYCHOSIS TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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FIGURE 14

FIRST ADMISSIONS OF PATIENTS WITH CEREBRAL ARTERIOSCLEROSIS TO STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

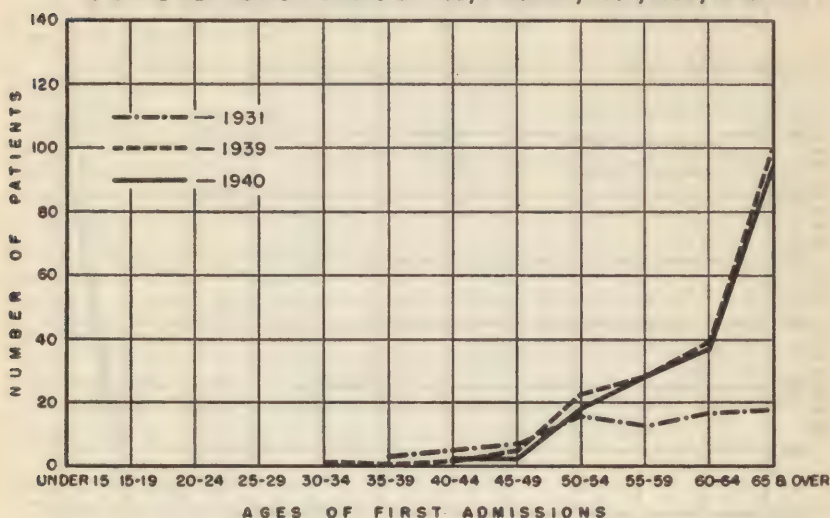
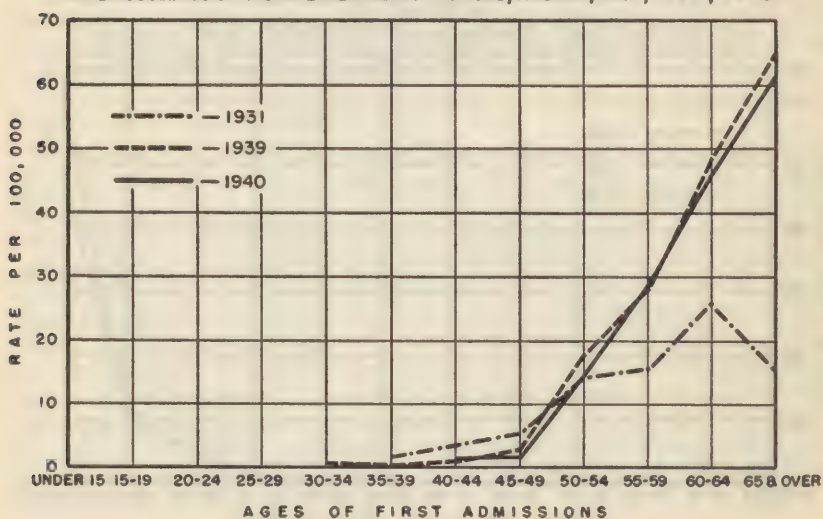


FIGURE 15

AGE SPECIFIC FIRST ADMISSION RATES FOR PATIENTS WITH CEREBRAL ARTERIOSCLEROSIS TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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FIGURE 16

FIRST ADMISSIONS OF PATIENTS WITH MANIC DEPRESSIVE PSYCHOSIS TO STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

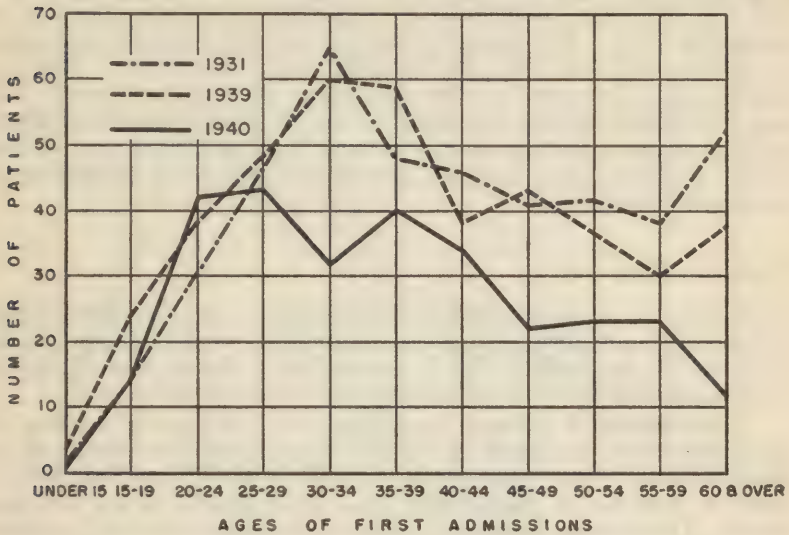
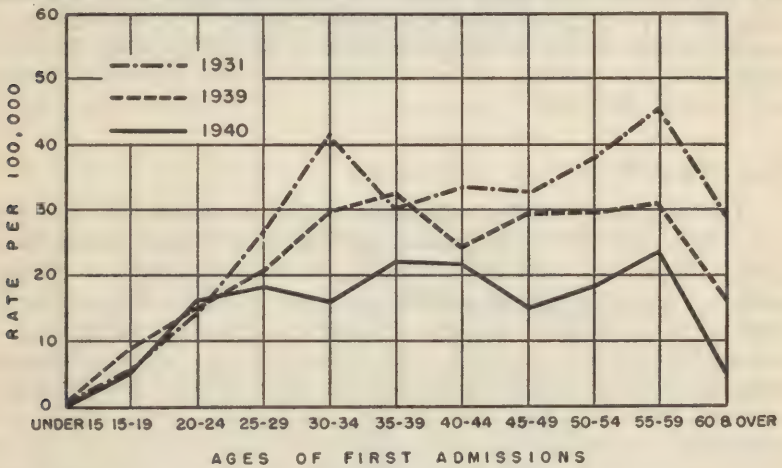


FIGURE 17

AGE SPECIFIC FIRST ADMISSION RATES OF PATIENTS WITH MANIC DEPRESSIVE PSYCHOSIS TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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decrease in the manic-depressive group. For example, in 1931, there were 429 patients admitted to State mental institutions who were diagnosed as manic-depressives. In 1939, there were 418, and in 1940 only 287. The age specific rates for this group have also shown a corresponding drop. For example, the age specific rate for those aged 45 to 49 was 32.6 in 1931, 29.3 in 1939, and 15.0 in 1940. There are corresponding decreases in other age groups for the same years. This drop is inconsistent with the trends in the number of manic-depressive patients reported for most other states as well as for the total United States. Such patients, however, are often diagnosed as schizophrenics (dementia praecox).

DEMENTIA PRAECOX

The number of dementia praecox patients has decreased slightly between 1931 and 1940. The changes are illustrated in Figures 18 and 19 (Table 11, Appendix). While the decline in the number of patients is small, the decline in the admission rate is somewhat larger.

The number of patients hospitalized with dementia praecox and manic-depressive psychosis in Virginia has shown a tendency to decrease, whereas most other states, as well as the United States total, show an increase in the number of such patients during the same period. The counter movement of this part of the patient population in Virginia can hardly be explained on the supposition that the people in Virginia are less susceptible to dementia praecox or manic-depressive psychosis. In some instances psychiatrists will differ in their diagnoses to the extent that some patients will be classified by one psychiatrist as manic-depressive and by another as dementia praecox. When the totals for the two diseases are combined, however, the Virginia trend does not become any more clear. It is undoubtedly due, therefore, to factors beyond the scope of the present report. In considering the possible future trends for hospitalization of mental patients it is quite likely that the number of manic-depressive and dementia praecox patients will increase.

"ALL OTHER TYPES"

The last group of first admissions to be considered for the years 1931, 1939, and 1940 is designated as "All Others" and includes alcoholics. Figures 20 and 21 (Table 12, Appendix) show the absolute numbers as well as the age specific rates per hundred thousand. This group of patients has increased strikingly in the ten-year period. A substantial proportion of the "All Other" group, however, includes alcoholics without psychosis (Table 13, Appendix). If this group is separated from the remainder of the "All Other" group, there is no substantial increase in the total number of first admissions. In the "All Other" group in 1940, 462 out of 1,096, or 42 per cent, were classified as alcoholics without psychosis, a rate of 17.3 per hundred thousand total population.

FIGURE 18

FIRST ADMISSIONS OF PATIENTS WITH DEMENTIA PRAECOX TO STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

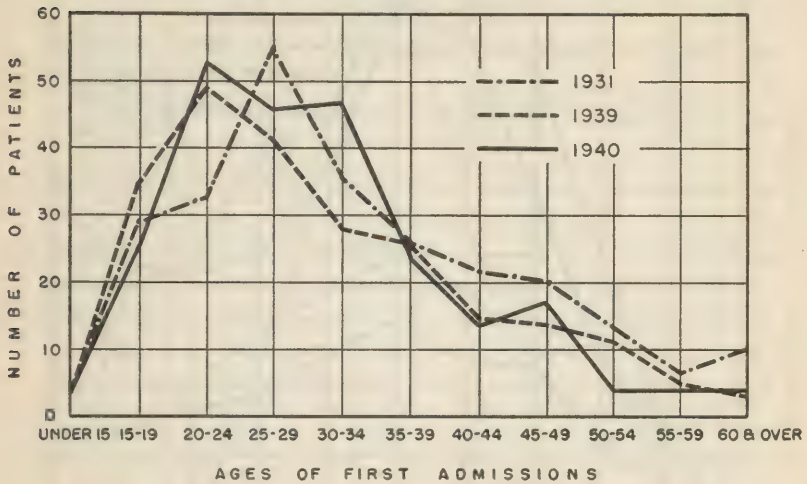
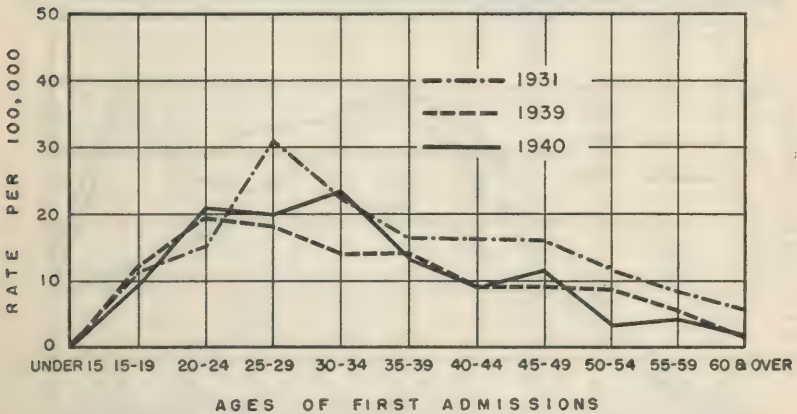


FIGURE 19

AGE SPECIFIC FIRST ADMISSION RATES OF PATIENTS WITH DEMENTIA PRAECOX TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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FIGURE 20
FIRST ADMISSIONS OF PATIENTS OF "ALL OTHER" TYPES TO
STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

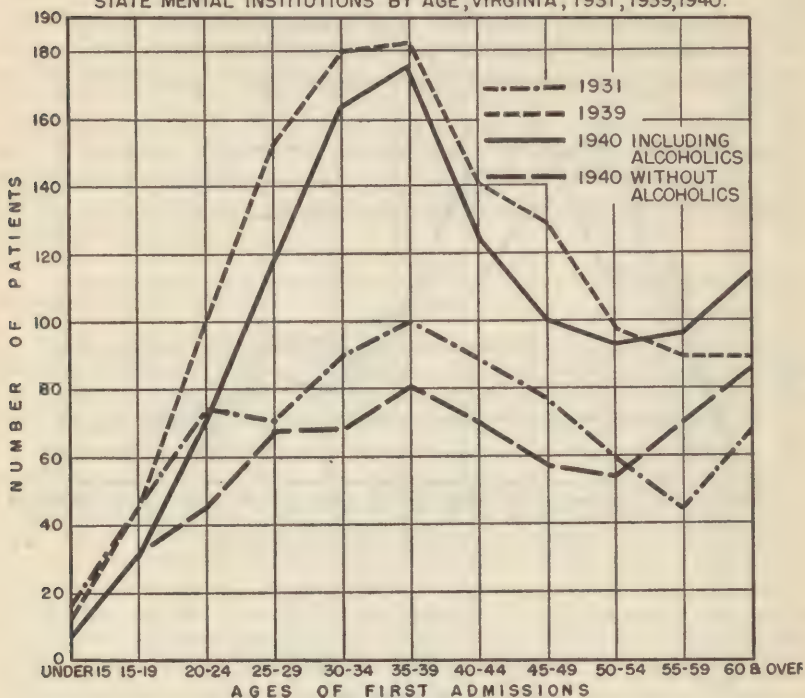
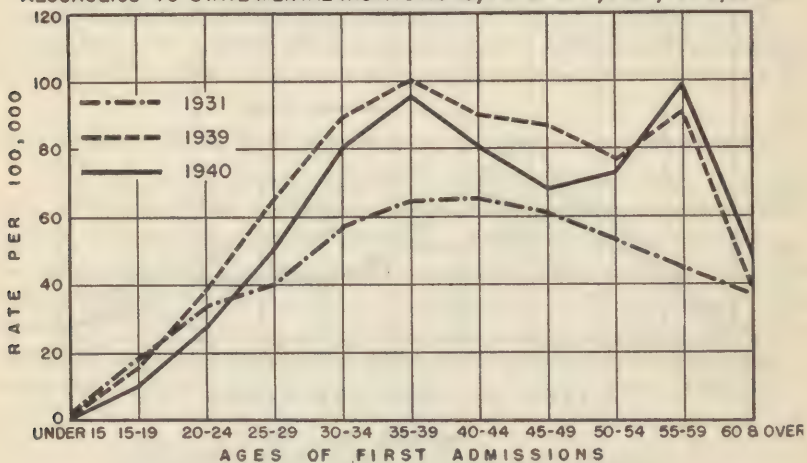


FIGURE 21
AGE SPECIFIC FIRST ADMISSION RATES OF "ALL OTHER" PATIENTS INCLUDING
ALCOHOLICS TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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FIGURE 22
FIRST ADMISSIONS OF ALCOHOLIC PATIENTS TO STATE
MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1940.

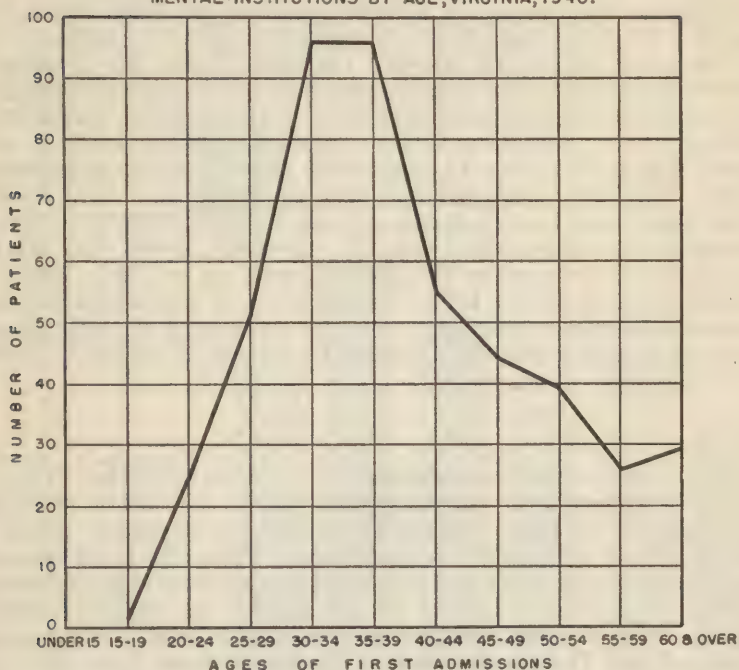
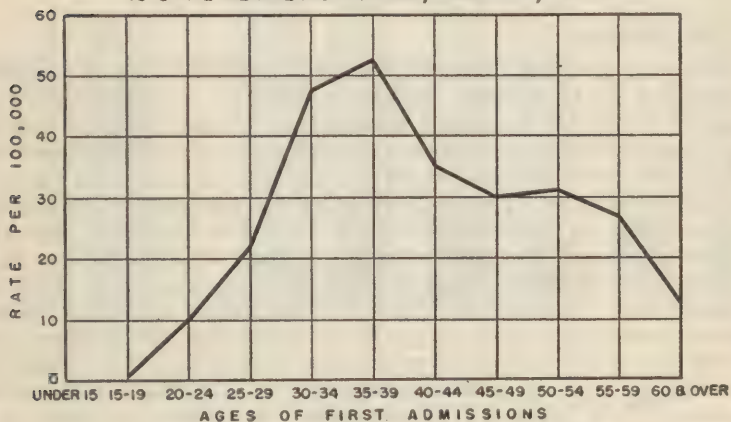


FIGURE 23
AGE SPECIFIC FIRST ADMISSION RATES OF ALCOHOLIC PATIENTS
TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1940.



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ALCOHOLISM

Figures 22 and 23 (Table 13, Appendix) show the age specific first admission rates of alcoholics without psychosis for 1940, which is the first year for which age data are available. The commitment rates for this group are highest between the ages 25 and 60. During this thirty-five-year span, the largest number of admissions and the highest age specific rates are for those from 30 to 40 years of age. Furthermore, the diagnosis of alcoholism without psychosis applies chiefly to white males. Figure 24 (Table 14, Appendix) shows the first admissions to mental institutions who are classified as alcoholics. This group is further subdivided into alcoholics with and without psychosis. The total number of alcoholics in 1931 was 235. By 1935, it was 567. In 1936 it reached 660, dropped to 539 in 1938, went up to 584 in 1939—and dropped back to 522 in 1940. The number of first admissions with alcoholism approximates closely the total number of alcoholic patients in mental hospitals, since the average time spent in hospitals by these patients is fairly short.

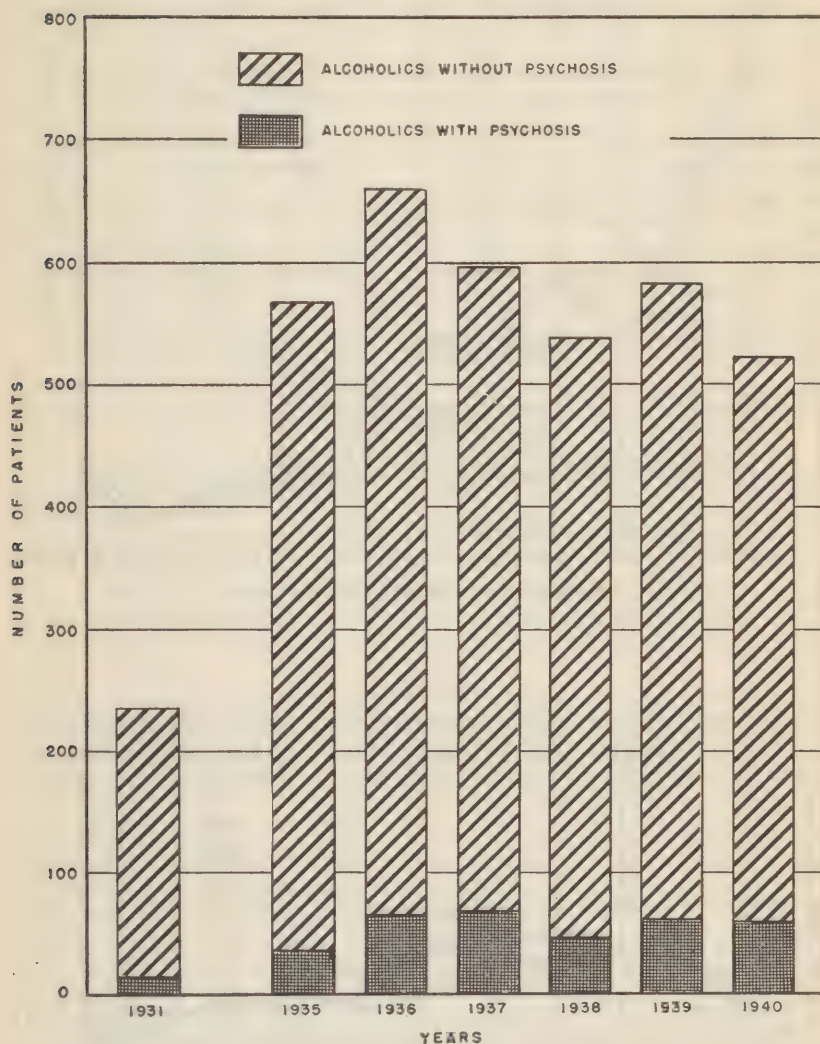
EPILEPSY

The next group to be considered is that of the epileptics. The total number of admissions of patients with epilepsy was 120 in 1931, 96 in 1939, and 103 in 1940. Figure 25 (Table 15, Appendix) shows the number of first admissions by age groups. Figure 26 gives the corresponding age specific rates, but it should be pointed out that the numbers on which these rates are based are too small to be reliable. They do suggest, however, that epilepsy is a disease which usually appears before age 40. The number under 15 increased from 19 in 1931 to 38 in 1940. However, the number of admissions under 15 in 1939 was only 10, so that it is entirely possible that this change in number may represent only a time lag in commitment.

Feeble-mindedness

The final group of patients in mental institutions to be considered is comprised of those with mental deficiency, or feeble-mindedness. Figure 27 (Table 16, Appendix) showing the number of first admissions by age groups indicates that such commitments have been increasing. In 1931 there were 261 first admissions, in 1939 there were 360, and in 1940 there were 498. Figure 28 showing the age specific commitment rates indicates no important changes in age composition, but again the rates are based on small numbers. Their chief value lies in the fact that they indicate the ages at which the largest numbers of patients are committed. It should be noted that the present rates of admissions of feeble-minded in Virginia are still far below the commitment rates of other states which have large urban populations, even though such commitments have increased considerably in Virginia during the last ten years. This group will become more of a social problem as the proportion of population living in urban areas increases, due primarily to the fact that mentally deficient persons cannot easily adjust themselves to complex environments. There is a further problem. In the

FIGURE 24
FIRST ADMISSIONS OF ALCOHOLICS TO FOUR MENTAL HOSPITALS
BY TYPE, VIRGINIA, 1931, 1935-1940.



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FIGURE 25

FIRST ADMISSIONS OF PATIENTS WITH EPILEPSY TO STATE MENTAL INSTITUTIONS BY AGE, VIRGINIA, 1931, 1939, 1940.

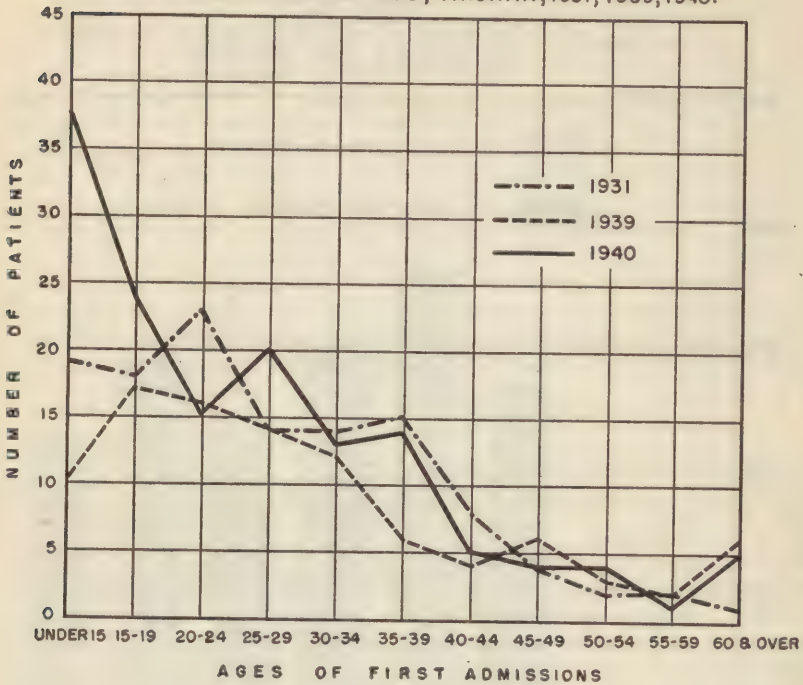
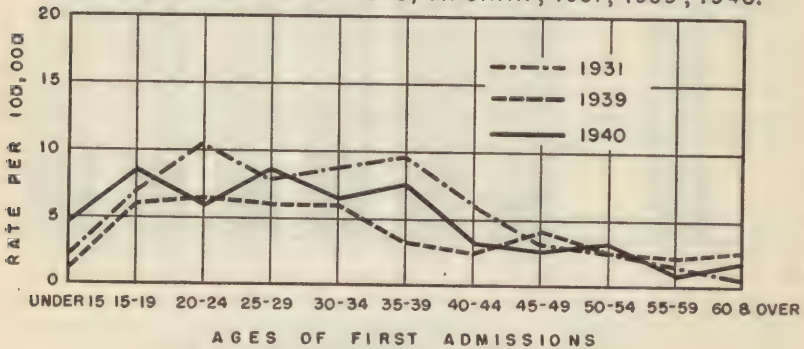


FIGURE 26

AGE SPECIFIC FIRST ADMISSION RATES OF PATIENTS WITH EPILEPSY TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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FIGURE 27

FIRST ADMISSIONS OF PATIENTS WITH MENTAL DEFICIENCY-TO
STATE MENTAL INSTITUTIONS BY AGE,VIRGINIA, 1931, 1939, 1940.

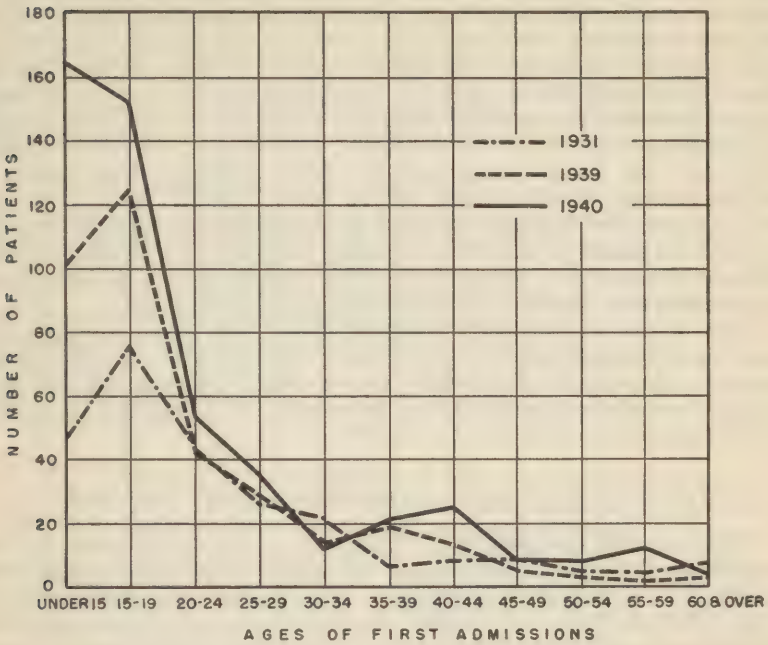
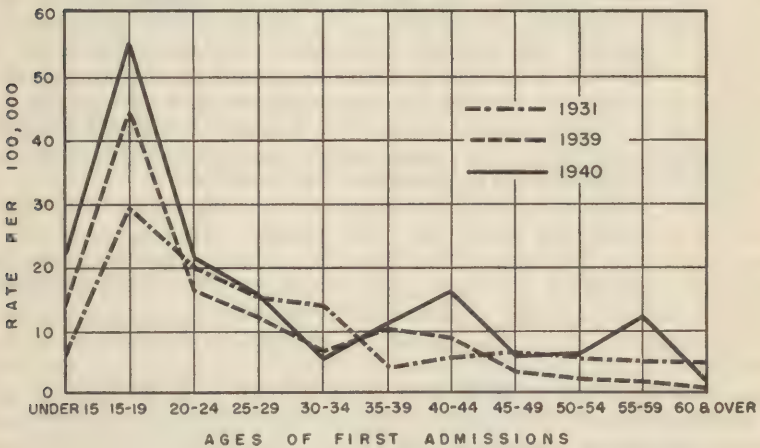


FIGURE 28

AGE SPECIFIC FIRST ADMISSION RATES OF MENTAL DEFECTIVES
TO STATE MENTAL INSTITUTIONS, VIRGINIA, 1931, 1939, 1940.



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long view, if the feeble-minded are permitted to marry and have children freely, the total burden which the State must bear at a future time is increased. It would seem the part of wisdom, therefore, to think in terms of a much larger number of patients with mental deficiency than has been considered heretofore. In a report made in 1937 by the late Major Charles J. Calrow, then Director of the Virginia State Planning Board, on the potential needs of the Negro feeble-minded, the conclusion was reached that the probable capacity required to take care of only the Negro portion of the feeble-minded population was about 1,800. This report was based on an analysis of World War I draft data and the experiences of other states which have devoted more time and resources thus far than has Virginia in improving the methods for the care and diagnosis of mentally deficient persons. There are scarcely sufficient data in the figures here presented, however, to determine the probable size of the patient load of mental defectives.

The reports of the State Hospital Board and other agencies deal largely with administrative problems. The purpose in this report has been primarily to observe the trends which influence the size and composition of the population to be treated or cared for in mental institutions.

III THE OUTLOOK FOR THE NEXT DECADE

The size and composition of Virginia's patient population for the next decade will be influenced by the increasing urban population, changes in administrative practice as regards the care and treatment of the different forms of mental disturbance, the facilities available, and the extent to which Virginians in the armed forces return home from the war with shattered nerves and mental breakdowns. The trend in admission rates to mental institutions shows the types of mental disturbance which may be expected to increase, those which may remain relatively unchanged, and those which may possibly decrease, under the less rigorous conditions of peace. Plans for the further development of mental institutions should anticipate, so far as possible, the expansion needed for the treatment and care of the casualties of war. There is little doubt that mental institutions will need to prepare themselves for this contingency, and the principal question becomes that of how large the increased load will be.

Present indications are that cerebral arteriosclerosis and senile dementia will increase during the next decade. This increase will be due primarily to the aging of the State's population and the fact that these are diseases of old age. The incidence of manic-depressive psychosis and of dementia praecox (schizophrenia) has decreased in the years compared. Since the trends in Virginia in this respect are at variance with the national trend, a change in commitment or diagnostic procedures might result in a marked increase in the number and the commitment rate of patients so classified during the next decade. There is no basis for assuming that all the patients suffering from these diseases are in the State hospitals.

In Table 17 (Appendix) the urban and rural components of the population are shown from 1920 to 1950. The rural population is

further subdivided into farm and non-farm. Two estimates of the population are given for 1950, each on a separate set of assumptions, a high estimate of 3,193,057 and a low estimate of 2,972,420. The assumptions are stated in later paragraphs. The estimates were computed by a simple extension of straight line trends of the urban and rural components of the population. This procedure seems satisfactory at present since the conditions influencing population change in Virginia are too unsettled at present to warrant the use of more elaborate methods.

As yet is it impossible to determine with any confidence what the future urban-rural distribution of population in the State will be. Necessarily some assumptions regarding this factor were made as a basis for the 1950 estimates. With the prospect of a long war, the ultimate effects on the State's population of Virginia's war industries and the extensive inward migration of workers can only be a matter of speculation. The estimates have been made, therefore, on the basis of expected changes in the composition of the population as regards urban, rural farm, and rural non-farm residence status. These three classifications seem appropriate for the following reasons:

1. The war activities are centered largely in a few areas, mostly urban, but some rural. While some of these areas in the 1940 Census did not have population densities sufficient to qualify them as urban places under the rules of the Census, they are likely to be so classified in 1950 if present trends continue. This will tend to augment considerably the urban proportion of the State's total population, so far as census figures are concerned.
2. There is some evidence to indicate that many farm workers, rural residents, and part-time farmers have left agriculture to work in war establishments. This will no doubt accelerate the rate of decline of the farm population in the State.
3. The rural non-farm population of the State, that is, the group living in small towns and villages, has been growing steadily. There is no evidence at the present time that this trend will change. If anything, an acceleration in the rate of growth in the rural non-farm population is to be expected.

The following assumptions regarding the urban, rural farm, and rural non-farm population are made as a basis for the 1950 estimates.

Estimate Number 1—Total Population of Virginia in 1950, 3,193,057.

1. A decrease in the rural farm population of 10.5 percent is assumed between 1940 and 1950; the same relative decline as between 1920 and 1930. During the twenties there was considerable opportunity for workers in rural areas to find employment in northern industrial cities, where wages and cash incomes were considerably greater than on Virginia farms. A similar situation prevails today. The longer the war lasts the

more serious will be the disruption of the urban-rural population pattern. During the thirties there was a small absolute increase in the rural farm population of Virginia, although the net result of population shifts shows that many people moved from the rural areas to urban centers. The extent of this farm to city migration, however, was much less during the thirties than the twenties. It is probable that the various public assistance programs of the past decade have served to reduce somewhat this away-from-the-farm movement. At the beginning of the forties, however, the trek from farm to city has been accelerating at an ever increasing pace in response to the urgent demand for workers in war industries. The effects are already reflected by the shortage of farm labor in rural Virginia, and the housing shortages in defense areas.

2. A gain of 19.5 per cent in rural non-farm population between 1940 and 1950 is assumed. This is the same relative increase as occurred between 1920 and 1930. Each of the past two decades has witnessed a substantial growth in the village and non-farm population in Virginia. A similar trend is evidenced all over the country. There seems to be little prospect of change in this trend for a decade or so.
3. A fifty per cent increase in the urban population is assumed. The basis for this assumption rests on the rapid growth now occurring in the Hampton Roads area, the Arlington-Alexandria-Fairfax area, and other defense areas in the State. With the progress of the war, more areas are likely to expand far beyond any pre-war expectations. There have already been substantial migrations of workers and their families into Virginia since 1940. After the war the migrants then living in the defense areas who have come from other states, as well as from other parts of Virginia, will have sacrificed their residence status in the places from which they came. Consequently, they will expect jobs, unemployment compensation, relief and public assistance in the areas where they have been working. These conditions will tend to deter outward migration from the defense areas at the conclusion of the war. Increases are also in prospect for other urban centers of the State, but not of the spectacular proportions already in evidence in the Hampton Roads and Washington areas.

Estimate Number 2—Total Population of Virginia, 1950, 2,972,420.

This low estimate of 2,972,420 assumes the following changes in Virginia's population between 1940 and 1950:

1. 3.6 per cent gain in the rural farm population.
2. 9.0 per cent increase of the rural non-farm population.
3. 20.0 per cent increase in urban population.

The foregoing percentages of increase are the same as those which obtained from 1930 to 1940 for the same categories.

Estimates of Patient Population, 1950

Figure 29 (Table 18, Appendix) gives four estimates of the 1950 patient population, each on a different set of assumptions. The first two of the following estimates are based upon the expected changes in total number and distribution of population by community classes, leaving out of account: (a) influence of changing age composition, (b) possible changes in administrative practice, and (c) possible effects of war experiences on personal characteristics. The second two estimates are based on a simple extrapolation of the trend of hospital population, 1914-1940, relative to the trend of total population.

Estimate 1 of the patient population (13,436) uses the high total population estimate of 3,193,057 for the State as its base. It assumes that the present rates of commitment for the urban and rural components of the population will not change.

Estimate 2 makes the same assumption as to rates of commitment as *Estimate 1*, but uses the low total population estimate of 2,972,420 as its base. It places the patient population in 1950 at 12,240.

Estimate 3 places the patient population at 15,087. It uses the high total population estimate of 3,193,057 as a base, and assumes a gradually increasing commitment rate for the total population, which is a projection of past trends. No separate projections of the urban and rural components of the population were made in this estimate.

Estimate 4 makes the same assumption as to rates of commitment as *Estimate 3*, but uses the low total population estimate of 2,972,420 as a base. It places the patient population in 1950 at 14,045.

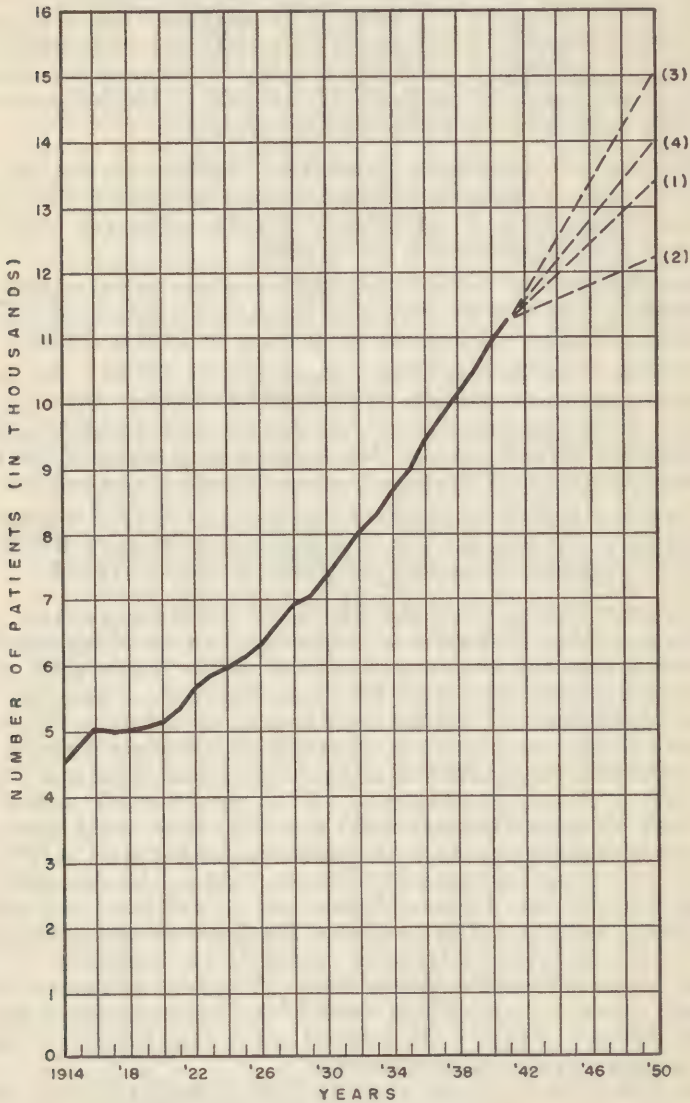
These four estimates of the size of the patient population which may be expected by 1950 serve to emphasize the roles which population distribution, size and characteristics play. Past trends show clearly that more patients come from the urban areas than from the rural portions of the State. With the trend toward urbanization in Virginia, even prior to the war, there was no evidence to indicate that the fifty-year trend would change its direction. As the result of the war it seems likely that a much larger increase in the State's total institutional population will occur between 1940 and 1950 than could reasonably have been expected on the basis of conditions existing prior to 1940.

In considering the prospects for the future, the desirability of treating the problems of mental disease, mental deficiency and epilepsy separately is essential. The provisions for diagnosis and commitment differ, as do the types of facilities needed in the treatment of these different types of mental disturbance. Separate estimates of the prospective patient populations need to be made for each type of disease. When the figures are grouped many essential characteristics of the patient population are obscured.

No allowances have been made in these estimates for the possible effects of changes in administrative practice, advancement in the treatment of certain diseases or other technological developments. It is difficult to appraise the potential effects of such changes on the hospitalization and treatment of the mentally deficient and mentally

FIGURE 29

PATIENT POPULATION IN INSTITUTIONS FOR MENTAL DISEASES AND MENTAL DEFECTIVES, VIRGINIA, 1914-1950 (1942-1950 ESTIMATED.)



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diseased during the next ten years. During the past ten years startling discoveries were made with respect to the treatment of dementia praecox. Up to the present, however, the application of these treatments has not materially decreased the number of schizophrenics in State hospitals. Moreover, there has not been a sufficient period of time since the discoveries were made to ascertain the extent to which the treatments may result in permanent cure. Some patients apparently have been cured, others return after a period of apparent cure with a second breakdown. The general assumption here is that while there have been tremendous advances, these advances will not drastically influence the size of the patient load during the next decade. The prospect of continuation of the current increase in the State population and increasing urbanization would indicate an increased patient load. The changes in composition of the total load are outlined in the summary.

SUMMARY

It is likely that during the next decade the total number of patients to be hospitalized in Virginia will increase. The size of the increase will depend upon the amount and character of population growth, changes in administrative practice regarding the care and treatment of the mental patients, the effects of the war on the civilian population, and the extent to which those who return from combat will be broken in mind and body. The prospective changes in the various components of the patient population to be cared for in the State's mental institutions, without regard to the possible effects of the war, are as follows:

1. An appreciable increase may be expected in the number of patients with senile dementia and arteriosclerosis. This will be the result of the fact that each year sees a somewhat larger proportion of the State's total population come into the age range where these diseases strike. The patient load in the hospitals may be eased somewhat by the fact that some of the senile patients can be adequately cared for on the outside. This is far more difficult, however, with arteriosclerotic patients.
2. If the past trends prevail, little or no increase is to be expected in the number of patients with manic-depressive psychosis and dementia praecox. As pointed out, however, the patient trend in Virginia in this respect runs counter to the trend in the rest of the nation. An increase among this group of patients is a distinct possibility.
3. The prospect of an increase in the "All Other" group of patients is slight, particularly if the non-psychotic alcoholic patients are excluded from consideration.
4. The practice in Virginia of including alcoholic patients without psychosis as a part of the total patient population materially raises the patient rate. Alcoholics are a special problem and

should be separately reported, especially when the rates of mental diseases in Virginia are compared with those of other states.

5. The prospects of an immediate increase in either the number or incidence of epilepsy appear remote.
6. A marked increase in the number of mental defectives is in prospect. During the past decade a sharp rise in the number of such patients has occurred. At present more than 500 such patients are on the waiting list for admission to State institutions. Facilities for their care are not available. The increasing urbanization of the State will also bring this problem into greater prominence.

APPENDIX

The figures in the tables are based on the Annual Reports of the State Hospital Board unless otherwise noted. Data for 1940 were obtained from the State Hospital Board in advance of publication.

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TABLE 1

NUMBER OF PATIENTS IN INSTITUTIONS FOR MENTAL DISEASES AND MENTAL DEFECTIVES
IN VIRGINIA AND RATIO OF PATIENTS TO TOTAL POPULATION

July 1, 1914, to June 30, 1940

	TOTAL		WHITE		COLORED	
	In Hospital	Rate Per 100,000 Population	In Hospital	Rate Per 100,000 Population	In Hospital	Rate Per 100,000 Population
1914.....	4,488	206.9	2,842	190.2	1,646	241.9
1915.....	4,787	218.6	3,034	200.6	1,753	256.9
1916.....	5,032	226.6	3,249	211.6	1,783	259.1
1917.....	5,000	222.7	3,195	204.9	1,805	262.4
1918.....	4,997	220.0	3,187	201.3	1,810	262.9
1919.....	5,025	218.8	3,212	200.0	1,813	262.6
1920.....	5,098	220.8	3,327	205.6	1,771	256.6
1921.....	5,265	226.4	3,456	210.7	1,809	263.9
1922.....	5,625	240.7	3,717	224.5	1,908	279.9
1923.....	5,844	248.9	3,834	229.5	2,010	296.4
1924 (9 mos.)...	5,918	250.9	3,875	229.9	2,043	303.2
1925.....	6,059	255.7	3,916	230.4	2,143	319.9
1926.....	6,287	264.9	4,005	233.6	2,282	342.6
1927.....	6,607	276.2	4,276	247.2	2,331	352.1
1928.....	6,924	288.2	4,451	255.2	2,473	375.7
1929.....	7,025	291.6	4,571	259.8	2,454	375.0
1930.....	7,389	305.1	4,802	271.2	2,587	397.1
1931.....	7,685	314.1	5,030	280.5	2,655	406.8
1932.....	8,054	325.9	5,237	288.3	2,817	430.8
1933.....	8,256	330.8	5,377	292.2	2,879	439.4
1934.....	8,640	342.7	5,609	300.9	3,031	461.7
1935.....	8,983	352.7	5,812	307.8	3,171	482.1
1936.....	9,449	367.3	6,063	317.0	3,386	513.8
1937.....	9,816	377.8	6,263	323.3	3,553	538.2
1938.....	10,162	387.2	6,627	337.7	3,535	534.4
1939.....	10,525	397.0	6,832	343.7	3,693	557.2
1940.....	10,912	407.5	6,988	347.0	3,924	590.9

Source—Annual Report of the State Hospital Board, 1939, p. 60,
Data for 1940—State Hospital Board.

TABLE 2

PROPORTION OF URBAN POPULATION 1930 AND 1940; RATES OF PATIENTS IN MENTAL INSTITUTIONS PER 100,000 POPULATION FOR SELECTED STATES

STATE	POPULATION PER CENT URBAN		RATE PER 100,000 POPULATION	
	1930	1940	Mentally Diseased* 1938	Epileptic and Mental Defectives† 1938
United States.....	56.2	56.5	289.3	75.2
Virginia.....	32.4	35.3	319.3	44.2
Ohio.....	67.8	66.8	270.9	108.0
Indiana.....	55.5	55.1	229.4	98.7
Illinois.....	73.9	73.6	359.2	87.8
Michigan.....	68.2	65.7	295.9	124.0
Wisconsin.....	52.9	53.5	70.1	79.8
Delaware.....	51.7	52.3	428.0	159.8
Maryland.....	59.8	59.3	362.7	64.8
District of Columbia.....	100.0	100.0	886.1	88.2
West Virginia.....	28.4	28.1	205.2	4.3
North Carolina.....	25.5	27.3	184.2	19.8
South Carolina.....	21.3	24.5	215.7	37.6
Georgia.....	30.8	34.4	233.5	10.8
Florida.....	51.7	55.1	252.3	30.0

**Patients in Mental Institutions 1938*, U. S. Department of Commerce, Bureau of the Census, Table 12, p. 23.

†Same. Table 73, p. 115.

TABLE 3

RATES OF FIRST ADMISSIONS TO MENTAL INSTITUTIONS PER 100,000 POPULATION
FOR SELECTED STATES, 1938

STATE	Institutions for the Mentally Diseased*	Institutions for the Epileptic and Mentally Defective†
United States.....	61.4	8.0
Virginia.....	92.5	9.0
Ohio.....	49.1	10.2
Indiana.....	43.6	8.1
Illinois.....	91.3	13.2
Michigan.....	56.4	8.8
Wisconsin.....	45.5	10.1
Delaware.....	94.3	25.7
Maryland.....	61.5	6.1
District of Columbia.....	125.0	6.1
West Virginia.....	58.1	0.3
North Carolina.....	53.9	1.4
South Carolina.....	68.7	2.7
Georgia.....	31.9	0.8
Florida.....	39.2	5.6

**Patients in Mental Institutions 1938*, U. S. Department of Commerce, Bureau of Census, Table 13, p. 24.

†Same. Table 74, p. 117.

TABLE 4

FIRST ADMISSIONS OF ALCOHOLIC PATIENTS (WITHOUT PSYCHOSIS) TO MENTAL
HOSPITALS AND CORRESPONDING RATES PER 100,000 BY SEX FOR
SELECTED STATES, 1938*

STATE	NUMBER			RATE PER 100,000		
	Total	Male	Female	Total	Male	Female
United States.....	4,230	3,708	522	3.2	5.6	.8
Virginia.....	488	443	45	18.2	32.8	3.4
Ohio.....	48	44	4	.7	1.3	.1
Indiana.....	7	7	.....	.2	.4	.....
Illinois.....	524	470	54	6.6	11.8	1.4
Michigan.....	57	48	9	1.1	1.8	.4
Wisconsin.....	155	147	8	4.9	9.2	.5
Delaware.....	2	1	1	.8	.7	.8
Maryland.....	40	35	5	2.2	3.8	.6
District of Columbia.....	.....	.....	.....	.....	.....	.....
West Virginia.....	97	87	10	5.1	9.0	1.1
North Carolina.....	351	332	19	9.8	18.6	1.1
South Carolina.....	90	88	2	4.7	9.4	.2
Georgia.....	18	16	2	.6	1.0	.1
Florida.....	6	6	.....	.3	.6	.....

*Patients in Mental Institutions 1938, U. S. Department of Commerce, Bureau of Census, Table 15, p. 30.

TABLE 5

MOVEMENT OF PATIENT POPULATION IN STATE INSTITUTIONS FOR MENTAL DISEASES AND MENTAL DEFECTIVES BY COLOR, VIRGINIA, 1935 TO 1940

	1935			1936		
	Total	White	Colored	Total	White	Colored
Number on books at the beginning of year.....	11,794	8,497	3,297	12,965	9,543	3,422
In hospitals.....	8,640	5,609	3,031	9,033	5,862	3,171
On parole.....	3,154	2,888	266	3,932	3,681	251
On escape.....						
Admitted During Year:						
First admissions.....	3,002	2,315	620	3,041	2,318	723
Re-admissions.....			67	87		87
Total admitted.....	3,002	2,315	687	3,128	2,318	810
Transferred.....	1	1		2	2	
Grand total admitted.....	3,003	2,316	687	3,130	2,320	810
Total under treatment.....	14,797	10,813	3,984	16,095	11,863	4,232
Discharged.....	1,136	838	298	1,601	1,353	248
Died.....	693	429	264	745	471	274
Total discharged and died.....	1,829	1,267	562	2,346	1,824	522
Transferred.....	3	3		7	7	
Grand total discharged.....	1,832	1,270	562	2,353	1,831	522
Total at end of year.....	12,965	9,543	3,422	13,742	10,032	3,710
In hospitals.....	9,033	5,862	3,171	9,449	6,063	3,386
On parole.....	3,932	3,681	251	4,293	3,969	324
On escape.....						

TABLE 5—CONTINUED

	1937			1938		
	Total*	White*	Colored	Total	White	Colored
Number on books at the beginning of year.....	13,809	10,099	3,710	14,420	10,457	3,963
In hospitals.....	9,449	6,063	3,386	9,894	6,341	3,553
On parole.....	4,360	4,036	324	4,526	4,116	410
On escape.....						
Admitted During Year:						
First admissions.....	3,314	2,405	832	2,705	1,957	748
Re-admissions.....			77	423	316	107
Total admitted.....	3,314	2,045	909	3,128	2,273	855
Transferred.....	3	3		6	6	
Grand total admitted.....	3,317	2,408	909	3,134	2,279	855
Total under treatment.....	17,126	12,507	4,619	17,554	12,736	4,818
Discharged.....	1,783	1,473	310	1,605	1,199	406
Died.....	852	506	346	930	517	413
Total discharged and died.....	2,635	1,979	656	2,535	1,716	819
Transferred.....	3	3		5	5	
Grand total discharged.....	2,638	1,982	656	2,540	1,721	819
Total at end of year.....	14,488	10,525	3,963	15,014	11,015	3,999
In hospitals.....	9,886	6,333	3,553	10,162	6,627	3,535
On parole.....	4,602	4,192	410	4,852	4,388	464
On escape.....						

*The 1937 Report of the Southwestern State Hospital gives the number on the books at the beginning of the year as 1,850, a difference of 67 from the number 1,783 given in the 1936 report as the number on the books at the end of 1936. Similarly the number on the books at the end of the year is given as 1,968, a difference of 68 from the number 1,900 given in the 1938 report. In making the charts the 1936 and 1938 totals were used, giving a discrepancy of 1 in the figures for white and total races.

TABLE 5—CONTINUED

	1939			1940		
	Total	White	Colored	Total	White	Colored
Number on books at the beginning of year.....	15,014	11,015	3,999	14,830	10,643	4,187
In hospitals.....	10,162	6,627	3,535	10,525	6,832	3,693
On parole.....	4,107	3,686	421	3,675	3,218	457
On escape.....	745	702	43	630	593	37
Admitted During Year:						
First admissions.....	2,725	1,941	784	2,622	1,787	835
Re-admissions.....	497	353	144	614	462	152
Total admitted.....	3,222	2,294	928	3,236	2,249	987
Transferred.....	192	42	150	69	67	2
Grand total admitted.....	3,414	2,336	1,078	3,305	2,316	989
Total under treatment.....	18,428	13,351	5,077	18,135	12,959	5,176
Discharged.....	2,632	2,203	429	2,280	1,809	471
Died.....	790	479	311	804	487	317
Total discharged and died.....	3,422	2,682	740	3,084	2,296	788
Transferred.....	176	26	150	68	66	2
Grand total discharged.....	3,598	2,708	890	3,152	2,362	790
Total at end of year.....	14,830	10,643	4,187	14,983	10,597	4,386
In hospitals.....	10,525	6,832	3,693	10,912	6,988	3,924
On parole.....	3,675	3,218	457	3,766	3,342	424
On escape.....	630	593	37	305	267	38

TABLE 6

FIRST ADMISSIONS TO STATE MENTAL INSTITUTIONS BY TYPE OF DISORDER, BY
COLOR AND BY SEX FOR SELECTED YEARS

	1931	1935	1936	1937	1938	1939	1940
Total All Races.....	2,085	2,663	2,740	2,887	2,722	2,725	2,622
Male.....	1,218	1,699	1,705	1,798	1,676	1,716	1,606
Female.....	867	964	1,035	1,089	1,046	1,009	1,016
Insane.....	1,483	1,532	1,594	1,824	1,688	1,679	1,519
Male.....	822	887	883	1,030	957	948	889
Female.....	661	645	711	794	731	731	630
Alcoholic (without psychosis) ..	219	531	595	527	492	522	462
Male.....	209	502	556	483	446	474	425
Female.....	10	29	39	44	46	48	37
Epileptic.....	120	151	106	150	129	110	143
Male.....	71	85	58	95	81	74	77
Female.....	49	66	48	55	48	36	66
Feeble-minded.....	263	449	445	386	413	414	498
Male.....	116	225	208	190	192	220	215
Female.....	147	224	237	196	221	194	283
Total White.....	1,516	2,043	2,017	2,055	1,974	1,941	1,787
Male.....	897	1,340	1,294	1,311	1,264	1,270	1,103
Female.....	619	703	723	744	710	671	684
Insane.....	991	1,041	1,021	1,152	1,121	1,097	948
Male.....	545	593	548	633	639	612	546
Female.....	446	448	473	519	482	485	402
Alcoholic (without psychosis) ..	219	529	585	521	476	511	446
Male.....	209	500	547	478	432	466	411
Female.....	10	29	38	43	44	45	35
Epileptic.....	87	111	70	111	102	94	117
Male.....	50	60	37	68	66	64	61
Female.....	37	51	33	43	36	30	56
Feeble-minded.....	219	362	341	271	275	239	276
Male.....	93	187	162	132	127	128	85
Female.....	126	175	179	139	148	111	191
Total Colored.....	569	620	723	832	748	784	835
Male.....	321	359	411	487	412	446	503
Female.....	248	261	312	345	336	338	332
Insane.....	492	491	573	672	567	582	571
Male.....	277	294	335	397	318	336	343
Female.....	215	197	238	275	249	246	228
Alcoholic (without psychosis) ..	.....	2	10	6	16	11	16
Male.....	.....	2	9	5	14	8	14
Female.....	.....	.....	1	1	2	3	2

TABLE 6—CONTINUED

	1931	1935	1936	1937	1938	1939	1940
Epileptic.....	33	40	36	39	27	16	26
Male.....	21	25	21	27	15	10	16
Female.....	12	15	15	12	12	6	10
Feeble-minded.....	44	87	104	115	138	175	222
Male.....	23	38	46	58	65	92	130
Female.....	21	49	58	57	73	83	92

TABLE 7

TOTAL FIRST ADMISSIONS TO STATE MENTAL INSTITUTIONS BY AGE AND CORRESPONDING AGE SPECIFIC ADMISSION RATES*, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,639	86	10.5	766,832	131	17.1	214	27.9
15-19.....	255,757	183	71.6	282,053	244	86.5	248	87.9
20-24.....	217,603	205	94.2	253,320	246	97.1	234	92.4
25-29.....	176,938	214	120.9	228,915	285	124.5	263	114.9
30-34.....	156,596	226	144.3	200,633	295	147.0	268	133.6
35-39.....	158,211	201	127.0	181,267	292	161.1	275	151.7
40-44.....	136,024	337	128.8	159,458	214	134.2	205	128.6
45-49.....	125,667			143,185	201	140.4	155	108.3
50-54.....	110,423	269	139.1	124,019	174	140.3	153	123.4
55-59.....	82,933			99,638	164	164.6	173	173.6
60-over.....	181,876	359	197.4	238,453	479	200.9	434	182.0
Unknown.....	1,184	5	.....	.....	.....	.....	.....	.....
Total—All ages.....	2,421,851	2,085	86.1	2,677,773	2,725	101.8	2,622	97.9

*Age Specific Admission Rates are computed by dividing the number of commitments in an age group by the total population of the corresponding age group and expressing the rate per 100,000.

TABLE 8
FIRST ADMISSIONS OF PATIENTS WITH SENILE PSYCHOSES TO STATE MENTAL INSTITUTIONS BY AGE; CORRESPONDING
AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 40.....	1,783,744	.....	.....	1,913,020	.....	.....	.....	.....
40-44.....	136,024	.....	.....	159,458	1	.6	.....	.....
45-49.....	125,667	.....	.....	143,185	.....	.....	.....	.....
50-54.....	110,423	.....	.....	124,019	.....	.....	.....	.....
55-59.....	82,933	8	7.2	99,638	1	.8	3	2.4
60-64.....	65,198	14	16.9	83,509	9	9.0	9	9.0
65-over.....	116,678	40	61.4	154,944	15	18.0	19	22.8
Unknown.....	1,184	143	122.6	.....	186	120.0	145	93.6
Total—All ages.....	2,421,851	205	8.5	2,677,773	212	7.9	176	6.6

TABLE 9
FIRST ADMISSIONS OF PATIENTS WITH CEREBRAL ARTERIOSCLEROSIS TO STATE MENTAL INSTITUTIONS BY AGE;
CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 30.....	1,468,937	.....	.....	1,531,120	.....	.....	.....	.....
30-34.....	156,596	.....	.....	200,633	1	.5	.....	.....
35-39.....	158,211	3	1.9	181,267	.....	.....	.....	.....
40-44.....	136,024	5	3.7	159,458	1	.6	2	1.3
45-49.....	125,667	7	5.6	143,185	4	2.8	2	1.4
50-54.....	110,423	16	14.5	124,019	22	17.7	18	14.5
55-59.....	82,933	13	15.7	99,638	27	27.1	28	28.1
60-64.....	65,198	17	26.1	83,509	39	46.7	37	44.3
65-over.....	116,678	18	15.4	154,944	100	64.5	94	60.7
Unknown.....	1,184	1	.....	.....	.....	.....	.....	.....
Total—All ages....	2,421,851	80	3.3	2,677,773	194	7.2	181	6.8

TABLE 10
FIRST ADMISSIONS OF PATIENTS WITH MANIC DEPRESSIVE PSYCHOSES TO STATE MENTAL INSTITUTIONS BY AGE;
CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,639	2	2	766,832	3	4	1	1
15-19.....	255,757	15	5.9	282,053	24	8.5	15	5.3
20-24.....	217,603	31	14.2	253,320	38	15.0	42	16.6
25-29.....	176,938	47	26.6	228,915	48	21.0	43	18.8
30-34.....	156,596	65	41.5	200,633	60	29.9	32	15.9
35-39.....	158,211	48	30.3	181,267	59	32.5	40	22.1
40-44.....	136,024	46	33.8	159,458	38	23.8	34	21.3
45-49.....	125,667	41	32.6	143,185	43	30.0	22	15.4
50-54.....	110,423	42	38.0	124,019	37	29.8	23	18.5
55-59.....	82,933	38	45.8	99,638	30	30.1	23	23.1
60-over.....	181,876	53	29.1	238,453	38	15.9	12	5.0
Unknown.....	1,184	1	.....	.....	.....	.....	.....	.....
Total—All ages....	2,421,851	429	17.7	2,677,773	418	15.6	287	10.7

TABLE 11

FIRST ADMISSIONS OF PATIENTS WITH DEMENTIA PRAECOX TO STATE MENTAL INSTITUTIONS BY AGE;
CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,369	3	.4	766,832	2	.3	3	.4
15-19.....	255,757	29	11.3	282,053	34	12.1	25	8.9
20-24.....	217,603	33	15.2	253,320	49	19.3	53	20.9
25-29.....	176,938	55	31.1	228,915	42	18.3	46	20.1
30-34.....	156,596	35	22.4	200,633	28	14.0	47	23.4
35-39.....	158,211	26	16.4	181,267	26	14.3	24	13.2
40-44.....	136,024	22	16.2	159,458	15	9.4	14	8.8
45-49.....	125,667	20	15.9	143,185	14	9.8	17	11.9
50-54.....	110,423	13	11.8	124,019	11	8.9	4	3.2
55-59.....	82,933	7	8.4	99,638	5	5.0	4	4.0
60-over.....	181,876	10	5.5	238,453	3	1.3	4	1.7
Unknown.....	1,184	2	.....	.....	.....	.....	.....	.....
Total—All ages....	2,421,851	255	10.5	2,677,773	229	8.6	241	9.0

TABLE 12

FIRST ADMISSIONS OF PATIENTS OF "ALL OTHER" CLASSES (INCLUDING ALCOHOLICS) TO STATE MENTAL INSTITUTIONS BY AGE;
CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,639	15	1.8	766,832	12	1.6	7	.9
15-19.....	255,757	45	17.6	282,053	45	16.0	32	11.3
20-24.....	217,603	74	34.0	253,320	100	39.5	70	27.6
25-29.....	176,938	71	40.1	228,915	152	66.4	118	51.5
30-34.....	156,596	90	57.5	200,633	180	89.7	164	81.7
35-39.....	158,211	102	64.5	181,267	182	100.4	176	97.1
40-44.....	136,024	89	65.4	159,458	141	88.4	125	78.4
45-49.....	125,667	77	61.3	143,185	129	90.1	101	70.5
50-54.....	110,423	59	53.4	124,019	97	78.2	93	75.0
55-59.....	82,933	45	54.3	99,638	89	89.3	96	96.3
60-over.....	181,876	68	37.4	238,453	89	37.3	114	47.8
Unknown.....	1,184	.....	.....	.....	.....	.....	.....	.....
Total—All ages....	2,421,851	735	30.3	2,677,773	1,216	45.4	*1,096	40.9

*This total includes 39 cases for whom diagnosis was deferred.

TABLE 13

FIRST ADMISSIONS OF PATIENTS WITH ALCOHOLISM (WITHOUT PSYCHOSIS) TO STATE
MENTAL INSTITUTIONS BY AGE; CORRESPONDING AGE SPECIFIC
ADMISSION RATES, 1940

AGE GROUPS	Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	766,832	.....	.....
15-19.....	282,053	1	.4
20-24.....	253,320	25	9.9
25-29.....	228,915	51	22.3
30-34.....	200,633	96	47.8
35-39.....	181,267	96	53.0
40-44.....	159,458	55	34.5
45-49.....	143,185	44	30.7
50-54.....	124,019	39	31.4
55-59.....	99,638	26	26.1
60-over.....	238,453	29	12.2
Unknown.....	.....	.....	.....
Total—All ages.....	2,677,773	462	17.3

TABLE 14

FIRST ADMISSIONS OF ALCOHOLICS TO FOUR MENTAL HOSPITALS BY COLOR, SEX AND
TYPE FOR SELECTED YEARS—VIRGINIA

	1931	1935	1936	1937	1938	1939	1940
ALCOHOLICS WITH PSYCHOSES:							
Total—All races.....	16	36	65	69	47	62	60
Male.....	14	31	60	55	42	59	53
Female.....	2	5	5	14	5	3	7
White.....	10	12	27	17	22	32	30
Male.....	10	12	24	13	19	32	28
Female.....			3	4	3		2
Colored.....	6	24	38	52	25	30	30
Male.....	4	19	36	42	23	27	25
Female.....	2	5	2	10	2	3	5
ALCOHOLICS WITHOUT PSYCHOSES:							
Total—All races.....	219	531	595	527	492	522	462
Male.....	209	502	556	483	446	474	425
Female.....	10	29	39	44	46	48	37
White.....	219	529	585	521	476	511	446
Male.....	209	500	547	478	432	466	411
Female.....	10	29	38	43	44	45	35
Colored.....		2	10	6	16	11	16
Male.....		2	9	5	14	8	14
Female.....			1	1	2	3	2
TOTAL ALCOHOLICS:							
Total—All races.....	235	567	660	596	539	584	522
Male.....	223	533	616	538	488	533	478
Female.....	12	34	44	58	51	51	44
White.....	229	541	612	538	498	543	476
Male.....	219	512	571	491	451	498	439
Female.....	10	29	41	47	47	45	37
Colored.....	6	26	48	58	41	41	46
Male.....	4	21	45	47	37	35	39
Female.....	2	5	3	11	4	6	7

TABLE 15

FIRST ADMISSIONS OF PATIENTS WITH EPILEPSY TO STATE MENTAL INSTITUTIONS BY AGE; CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931*	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,639	19	2.3	766,832	10	1.3	38	5.0
15-19.....	255,757	18	7.0	282,053	17	6.0	24	8.5
20-24.....	217,603	23	10.6	253,320	16	6.3	15	5.9
25-29.....	176,938	14	7.9	228,915	14	6.1	20	8.7
30-34.....	156,596	14	8.9	200,633	12	6.0	13	6.5
35-39.....	158,211	15	9.5	181,267	6	3.3	14	7.7
40-44.....	136,024	8	5.9	159,458	4	2.5	5	3.1
45-49.....	125,667	4	3.2	143,185	6	4.2	4	2.8
50-54.....	110,423	4	2.1	124,019	3	2.4	4	3.2
55-59.....	82,933	1	.5	99,638	2	2.0	1	1.0
60-over.....	181,876	1		238,453	6	2.5	5	2.1
Unknown.....	1,184							
Total.....	2,421,851	120	5.0	2,677,773	96	3.6	143	5.3

*Figures do not include epileptics without psychoses in four hospitals; do include this group in Lynchburg Colony.

TABLE 16

FIRST ADMISSIONS OF PATIENTS WITH MENTAL DEFICIENCY TO STATE MENTAL INSTITUTIONS BY AGE; CORRESPONDING AGE SPECIFIC ADMISSION RATES, 1931, 1939, 1940

AGE GROUP	Population 1930	First Admissions 1931*	Rate Per 100,000 Population 1930	Population 1940	First Admissions 1939	Rate Per 100,000 Population 1940	First Admissions 1940	Rate Per 100,000 Population 1940
Under 15.....	818,639	47	5.7	766,832	104	13.6	165	21.5
15-19.....	255,757	76	29.7	282,053	124	44.0	152	53.9
20-24.....	217,603	44	20.2	253,320	43	17.0	54	21.3
25-29.....	176,938	27	15.3	228,915	29	12.7	36	15.7
30-34.....	156,596	22	14.0	200,633	14	7.0	12	6.0
35-39.....	158,211	7	4.4	181,267	19	10.5	21	11.6
40-44.....	136,024	18	6.9	159,458	14	8.8	25	15.7
45-49.....	125,667	10	5.2	143,185	5	3.5	9	6.3
50-54.....	110,423	10	5.2	124,019	3	2.4	8	6.5
55-59.....	82,933	9	4.9	99,638	2	2.0	12	12.0
60-over.....	181,876	1	4.9	238,453	3	1.3	4	1.7
Unknown.....	1,184	1	.....	.....	.....	.....	.....	.....
Total.....	2,421,851	†261	10.8	2,677,773	360	13.0	498	18.6

*Figures do not include mental defectives without psychoses in four hospitals; do include this group in Lynchburg Colony.

†Total does not agree with total of 263 given in Table 6.

TABLE 17

ESTIMATES OF FUTURE POPULATION

a. Population and Percentage Distribution by Community Class

COMMUNITY CLASS	POPULATION					PERCENTAGE DISTRIBUTION				
	1920	1930	1940	1950 ¹	1950 ²	1920	1930	1940	1950 ¹	1950 ²
Total—All classes	2,309,187	2,421,851	2,677,773	3,193,057	2,972,420	100.0	100.0	100.0	100.0	100.0
Urban	673,984	785,537	944,675	1,417,013	1,136,444	29.1	32.4	35.3	44.4	38.2
Rural—Non-farm	575,290	687,568	749,739	895,938	817,216	25.0	28.4	28.0	28.0	27.5
Rural—Farm	1,059,913	948,746	983,359	880,106	1,018,760	45.9	39.2	36.7	27.6	34.3

b. Population Change by Community Class by Decades

COMMUNITY CLASS	POPULATION CHANGE				PERCENTAGE CHANGE			
	1920-1930	1930-1940	1940-1950 ¹	1940-1950 ²	1920-1930	1930-1940	1940-1950 ¹	1940-1950 ²
Total—All Classes	112,664	255,922	515,284	294,647	4.9	10.6	19.2	11.0
Urban	111,553	159,138	472,338	191,769	16.6	20.3	50.0	20.3
Rural—Non-farm	112,278	62,171	146,199	67,477	19.5	9.0	19.5	9.0
Rural—Farm	-111,167	34,613	-103,253	35,401	-10.5	3.6	-10.5	3.6

¹Estimate 1. See page 33.²Estimate 2. See page 34.

TABLE 18

ESTIMATES OF PATIENTS IN INSTITUTIONS FOR MENTAL DISEASES AND
MENTAL DEFECTIVES IN VIRGINIA—1950

	Estimated Population 1950	Estimated Rate Per 100,000 Population 1950	Number of Patients in Hospitals 1940	Estimated Number of Patients in Hospitals 1950
1. Total.....	3,193,057	420.8	10,912	13,436
Urban.....	1,417,013	501.9	*4,741	7,112
Rural.....	1,776,044	356.1	*6,171	6,324
2. Total.....	2,972,420	411.8	10,912	12,240
Urban.....	1,136,444	501.9	*4,741	5,703
Rural.....	1,835,976	356.1	*6,171	6,537
3. Total.....	3,193,057	472.5	10,912	15,087
4. Total.....	2,972,420	472.5	10,912	14,045

*Estimated figures based on distribution between urban and rural residents reported by first admissions in 1939.

1939 patient population with urban residence

1. Estimate of patient population based on $\frac{1939 \text{ patient population with urban residence}}{1940 \text{ urban population} \div 100,000}$

and $\frac{1939 \text{ patient population with rural residence}}{1940 \text{ rural population} \div 100,000}$, assuming 1950 population to be

3,193,057. This estimate assumes a rapid growth in the Hampton Roads and Arlington, Alexandria, and Fairfax areas and a drop in rural population to the 1930 level.

2. Estimate of patient population based on urban-rural rates as in (1), assuming 1950 population to be 2,972,420.


3. Estimate of patient population assuming a continuation of present trend in total commitment rate and a population base of 3,193,057.

4. Same as (3) with a population base of 2,972,420.







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